

10/532,263

=> d his

(FILE 'HOME' ENTERED AT 10:22:15 ON 13 NOV 2008)

FILE 'REGISTRY' ENTERED AT 10:22:48 ON 13 NOV 2008

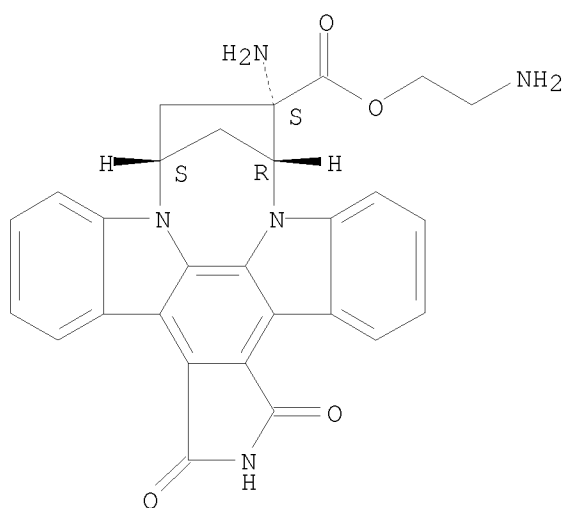
L1	STRUCTURE UPLOADED			
L2	8	S	L1	
L3	126	S	L1	SSS FUL
L4	125	S	L3	AND CAPLUS/LC
L5	1	S	L3	NOT L4

=> d

10/532,263

L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN
RN 703404-85-7 REGISTRY
ED Entered STN: 04 Jul 2004
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocine-10-carboxylic acid,
10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, 2-aminoethyl ester,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H23 N5 O4
CI COM
SR CA

Relative stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L6 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:271655 CAPLUS

DOCUMENT NUMBER: 148:535309

TITLE: Tau kinase inhibitors protect hippocampal synapses despite of insoluble tau accumulation

AUTHOR(S): Hinners, Ina; Hill, Anika; Otto, Ulrike; Michalsky, Anke; Mack, Till G. A.; Striggow, Frank

CORPORATE SOURCE: KeyNeurotek Pharmaceuticals AG, Magdeburg, D-39120, Germany

SOURCE: Molecular and Cellular Neuroscience (2008), 37(3), 559-567

CODEN: MOCNED; ISSN: 1044-7431

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A better understanding of the cellular and mol. pathomechanisms of Alzheimer's disease (AD) is a prerequisite for the development of efficient treatments. We have used a novel assay system based on virus-transduced organotypic hippocampal slice cultures that mimics important aspects of tau-driven AD pathol. in a short time frame. Human tau P301L, when expressed in pyramidal neurons of hippocampal slice cultures, was increasingly phosphorylated at several disease-relevant epitopes, leading to progressive neuronal dystrophy and formation of RIPA-insol. tau. AD-like tau hyperphosphorylation was reduced by the tau kinase inhibitors lithium and SRN-003-556, but RIPA-insol. tau remained unaffected after treatment with any of these substances. Only SRN-003-556 was able to protect hippocampal neurons from synaptic damage that was presumably caused by a toxic soluble tau fraction. These data provide first mechanistic insights towards the functional benefits of SRN-003-556 that have been observed in vivo.

IT 906665-84-7, SRN 003-556

RL: BUU (Biological use, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

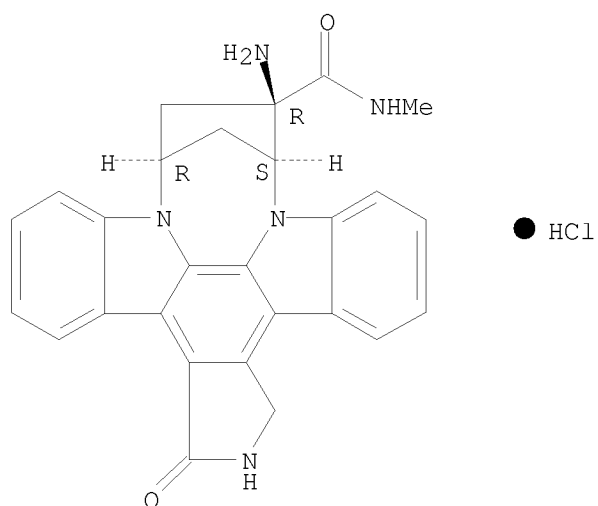
(tau kinase inhibitors protect hippocampal synapses despite of insol. tau accumulation)

RN 906665-84-7 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide, 10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1-oxo-, hydrochloride (1:1), (9S,10R,12R)- (CA INDEX NAME)

Absolute stereochemistry.

10/532,263



REFERENCE COUNT:

38

THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:232200 CAPLUS

DOCUMENT NUMBER: 146:514513

TITLE: Development of inhibitors of pathological tau hyperphosphorylation for a disease modifying approach to Alzheimer's disease

AUTHOR(S): Sahagun, H.; Huebinger, G.; Klafki, H.; Gordon, S.; Ferrand, S.; Muehlbacher, S.; Mueller, S.; Seneci, P.; Monse, B.; Froehner, W.; Casiraghi, L.; du Boullay, O.; Thillaye; Braxmeier, T.; LeCorre, S.; Dirscherl, L.; Jolival, C.; Lahu, G.; Sobek-Klocke, I.; Plesnila, N.; Hutton, M.; Roder, H.

CORPORATE SOURCE: Sirenade Pharmaceuticals AG, Munich, Germany

SOURCE: New Trends in Alzheimer and Parkinson Related Disorders: ADPD 2005, Collection of Selected Free Papers of the International Conference on Progress in Alzheimer's and Parkinson's Disease (AD/PD), 7th, Sorrento, Italy, Mar. 9-13, 2005 (2005), 71-76. Editor(s): Fisher, A. Monduzzi Editore: Bologna, Italy.

CODEN: 69IYJM; ISBN: 88-7587-174-4

DOCUMENT TYPE: Conference

LANGUAGE: English

AB Pathol. hyperphosphorylation of tau protein appears to be an early and critical step in the process leading to tau-pathol. and neurodegeneration in Alzheimer's disease (AD) and other tauopathies. Pathol. hyperphosphorylation of tau is believed to be the consequence of an imbalance of kinases and phosphatases that results in the phosphorylation of critical sites, leading to detachment from microtubules, accumulation in the somatodendritic compartment and ultimately aggregation to form paired helical filaments (PHFs). One possible means to modify the course of AD and other tauopathies is to inhibit the putative kinase activities leading to the inappropriate phosphorylation of tau. Based on initial in vitro evidence related to the maximal stoichiometry of tau phosphorylation, the mitogen activated/extracellular signal regulated kinase MAPK/ERK2 was considered for developing a targeted library of compds. with kinase inhibitory activities. Promising inhibitor candidates were identified in a screening cascade comprised of primary kinase assays, cellular models of PHF-type tau hyperphosphorylation, and a transgenic animal model of authentic neurofibrillary degeneration.

IT 906665-84-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

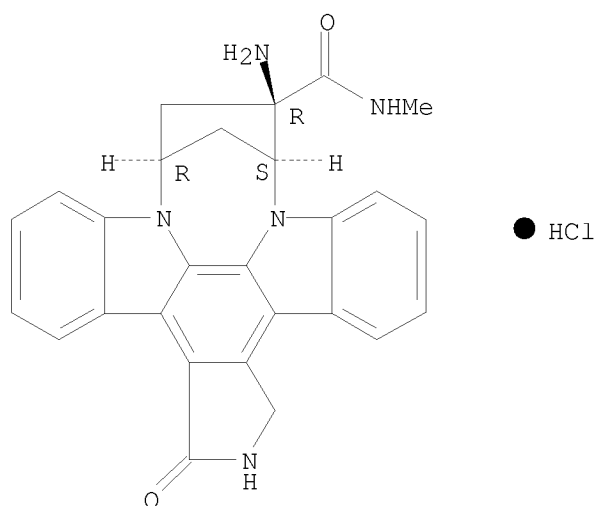
(SRN 003-556; SRN-003-556 inhibited human tau hyperphosphorylation in hippocampal rat model of Alzheimer's disease)

RN 906665-84-7 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide, 10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1-oxo-, hydrochloride (1:1), (9S,10R,12R)- (CA INDEX NAME)

Absolute stereochemistry.

10/532,263



REFERENCE COUNT:

13

THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:647437 CAPLUS

DOCUMENT NUMBER: 145:263072

TITLE: An inhibitor of tau hyperphosphorylation prevents severe motor impairments in tau transgenic mice

AUTHOR(S): Le Corre, Sylvie; Klafki, Hans W.; Plesnila, Nikolaus; Huebinger, Gabriele; Obermeier, Axel; Sahagun, Heidi; Monse, Barbara; Seneci, Pierfausto; Lewis, Jada; Eriksen, Jason; Zehr, Cynthia; Yue, Mei; McGowan, Eileen; Dickson, Dennis W.; Hutton, Michael; Roder, Hanno M.

CORPORATE SOURCE: Sirenade Pharmaceuticals, Martinsried, 82152, Germany

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2006), 103(25), 9673-9678
CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An orally bioavailable and blood-brain barrier penetrating analog of the kinase inhibitor K252a was able to prevent the typical motor deficits in the tau (P301L) transgenic mouse model (JNPL3) and markedly reduce soluble aggregated hyperphosphorylated tau. However, neurofibrillary tangle counts were not reduced in the successfully treated cohort, suggesting that the main cytotoxic effects of tau are not exerted by neurofibrillary tangles but by lower mol. mass aggregates of tau. Our findings strongly suggest that abnormal tau hyperphosphorylation plays a critical role in the development of tauopathy and suggest a previously undescribed treatment strategy for neurodegenerative diseases involving tau pathol.

IT 906665-84-7, SRN 003-556

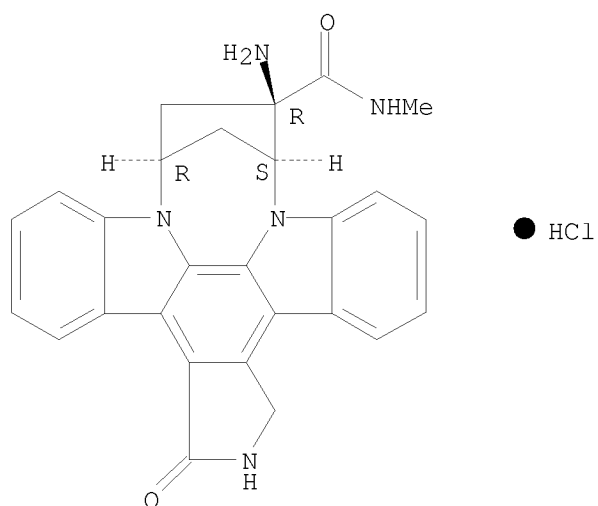
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibitor of tau hyperphosphorylation prevents severe motor impairments in tau transgenic mice)

RN 906665-84-7 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1-oxo-, hydrochloride (1:1),
(9S,10R,12R)- (CA INDEX NAME)

Absolute stereochemistry.

10/532,263



REFERENCE COUNT:

26

THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:699415 CAPLUS

DOCUMENT NUMBER: 143:347145

TITLE: The synthesis of bioactive indolocarbazoles related to K-252a

AUTHOR(S): Moffat, David; Nichols, Christopher J.; Riley, Dean A.; Simpkins, Nigel S.

CORPORATE SOURCE: Celltech Therapeutics Ltd, Slough, SL1 4EN, UK

SOURCE: Organic & Biomolecular Chemistry (2005), 3(16), 2953-2975

CODEN: OBCRAK; ISSN: 1477-0520

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:347145

AB A range of functionalized indolocarbazoles, related to the natural product K-252a, have been prepared, starting from a readily available bridged cyclopentene, cis-3,5-dibromocyclopentene. Sequences of transformations, involving initial hydroboration-oxidation to give a ketone, or by dihydroxylation and cyclic sulfate formation, enable the preparation of diverse indolocarbazole products. Issues of imide nitrogen protection for the indolocarbazole, and opportunities for asym. desymmetrization of key intermediates were also explored. A novel chiral lithium amide base mediated transformation of a cyclic sulfate intermediate gave the anticipated ketone product in up to 87% ee. A number of compds., in the form of unprotected imide substituted indolocarbazoles, were screened for biol. activity and were found to be potent inhibitors of a number of kinase enzymes.

IT 703404-92-6P

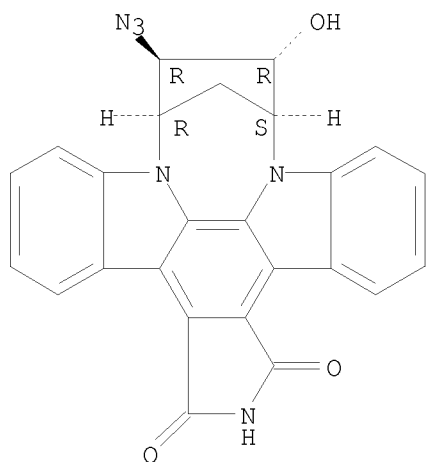
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation of functionalized indolocarbazole derivs. and study of its activity as protein kinase inhibitors)

RN 703404-92-6 CAPLUS

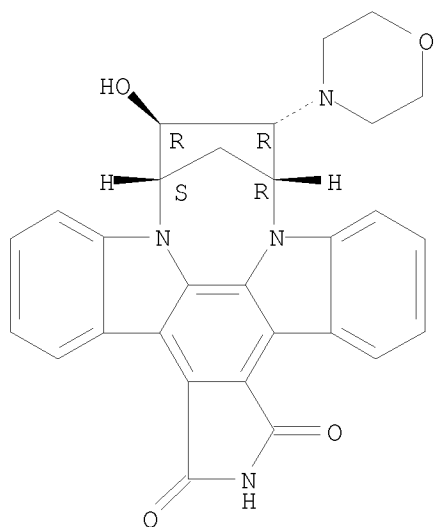
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione, 10-azido-9,10,11,12-tetrahydro-11-hydroxy-, (9R,10R,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 865485-74-1P 865485-75-2P 865485-76-3P
 865485-77-4P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL
 (Biological study); PREP (Preparation)
 (preparation of functionalized indolocarbazole derivs. and study of its
 activity as protein kinase inhibitors)
 RN 865485-74-1 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
 i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-11-(4-morpholinyl)-,
 (9R,10S,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

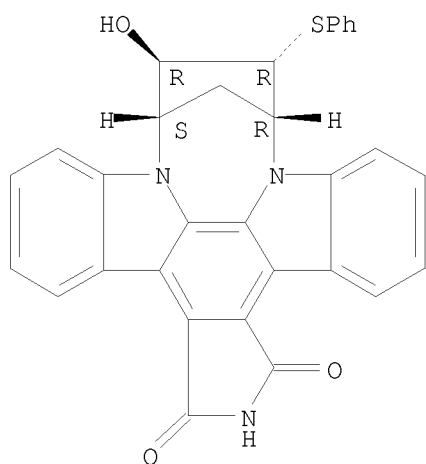


RN 865485-75-2 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
 i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-11-(phenylthio)-, (9R,10S,11S,12S)-rel-

10/532,263

(9CI) (CA INDEX NAME)

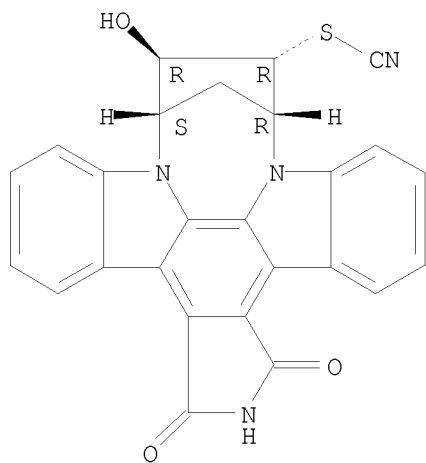
Relative stereochemistry.



RN 865485-76-3 CAPLUS

CN Thiocyanic acid, (9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-1,3-dioxo-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl ester, rel- (9CI) (CA INDEX NAME)

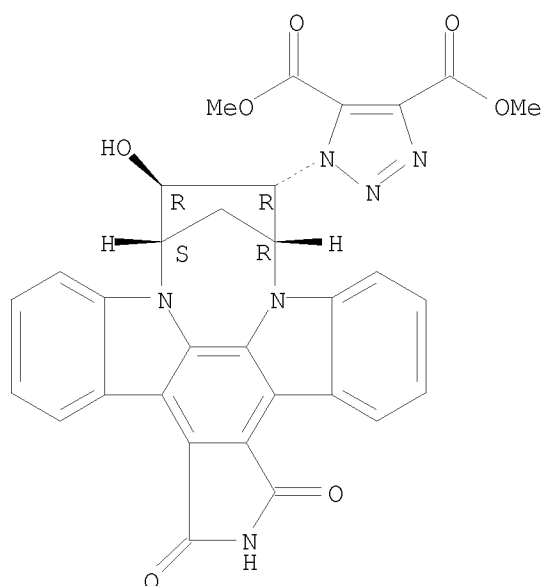
Relative stereochemistry.



RN 865485-77-4 CAPLUS

CN 1H-1,2,3-Triazole-4,5-dicarboxylic acid, 1-[(9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-1,3-dioxo-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl]-, dimethyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 233253-34-4P 233253-35-5P

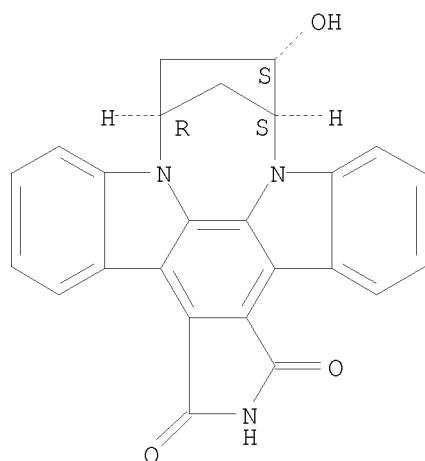
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation of functionalized indolocarbazole derivs. and study of their activity as protein kinase inhibitors)

RN 233253-34-4 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione, 9,10,11,12-tetrahydro-10-hydroxy-, (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

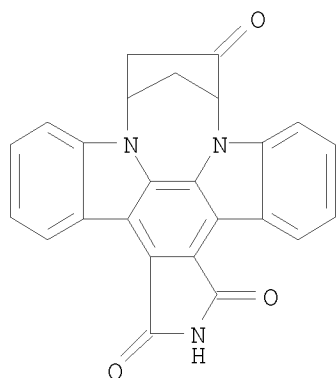
Relative stereochemistry.



RN 233253-35-5 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-

i][1,6]benzodiazocine-1,3,10(2H,9H)-trione, 11,12-dihydro- (9CI) (CA INDEX NAME)



IT 233253-37-7P 865606-88-8P

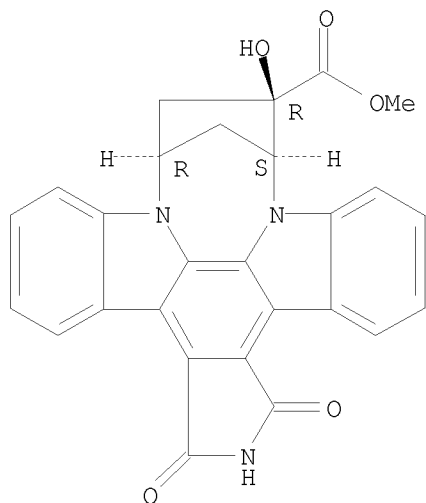
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation of functionalized indolocarbazole derivs. and study of their activity as protein kinase inhibitors)

RN 233253-37-7 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 2,3,9,10,11,12-hexahydro-10-hydroxy-1,3-dioxo-, methyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

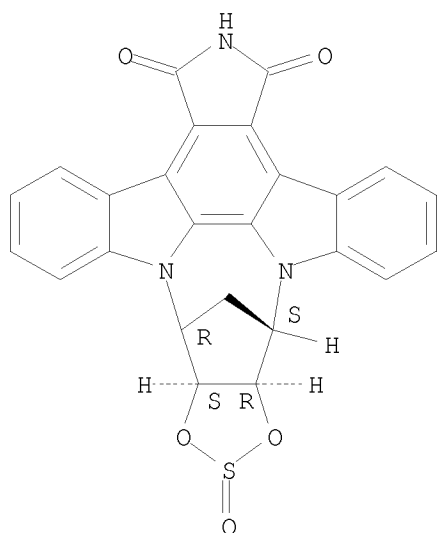


RN 865606-88-8 CAPLUS

CN 6,10-Methano-16H-[1,3,2]dioxathiolo[4,5-c]diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-16,18(17H)-dione, 6,6a,9a,10-tetrahydro-, 8-oxide, (6R,6aS,9aR,10S)-rel- (9CI) (CA INDEX NAME)

10/532,263

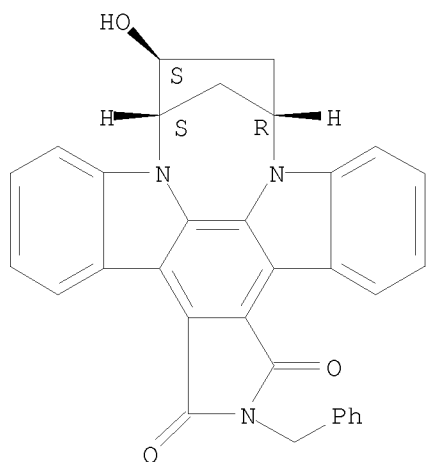
Relative stereochemistry.



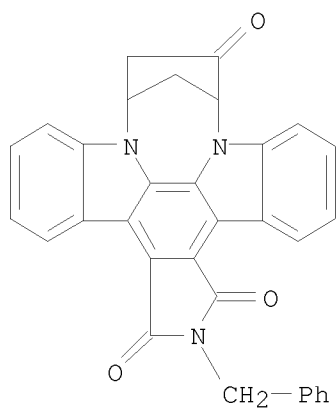
IT 233253-26-4P 233253-27-5P 233253-30-0P
233253-31-1P 253680-57-8P 253680-58-9P
703405-34-9P 786688-05-9P 786688-06-0P
786688-07-1P 786688-09-3P 786688-10-6P
786688-12-8P 786688-13-9P 865485-69-4P
865485-72-9P 865485-73-0P 865606-87-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of functionalized indolocarbazole derivs. related to natural
product K-252a using indolo[2,3-a]pyrrolo[3,4-c]carbazole dione and
cis-di(bromo)cyclopentene as starting materials)
RN 233253-26-4 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-hydroxy-2-(phenylmethyl)-, (9R,10R,12S)-rel-
(9CI) (CA INDEX NAME)

Relative stereochemistry.

10/532,263

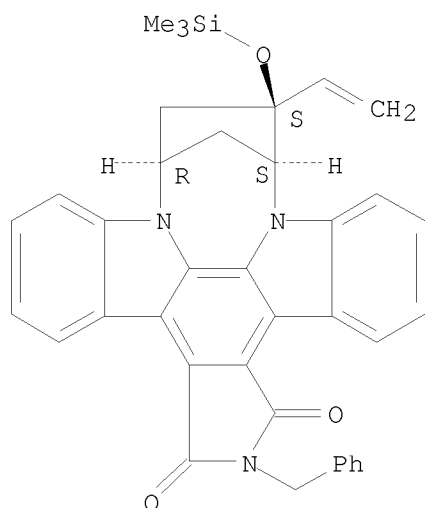


RN 233253-27-5 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
11,12-dihydro-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



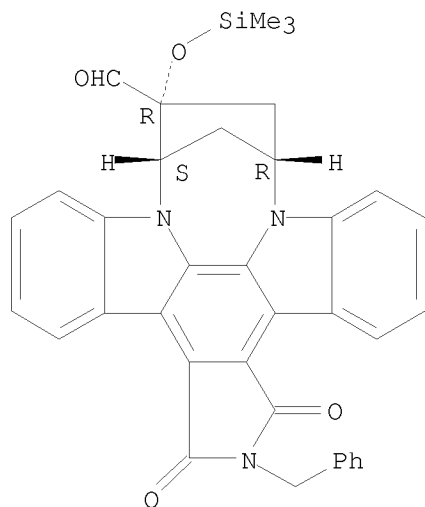
RN 233253-30-0 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
10-ethenyl-9,10,11,12-tetrahydro-2-(phenylmethyl)-10-[(trimethylsilyl)oxy]-
, (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



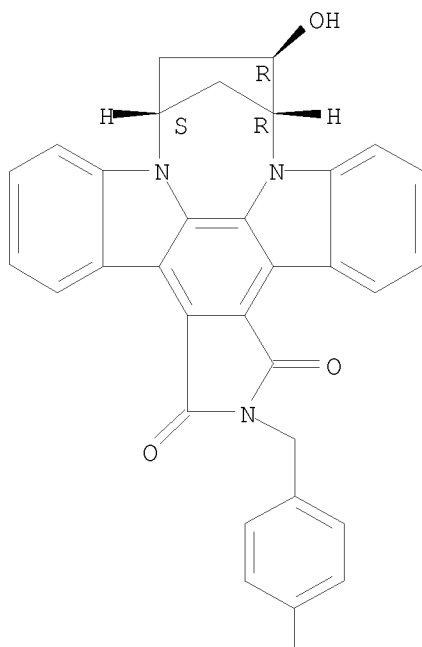
RN 233253-31-1 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxaldehyde,
 2,3,9,10,11,12-hexahydro-1,3-dioxo-2-(phenylmethyl)-10-
 [(trimethylsilyl)oxy]-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

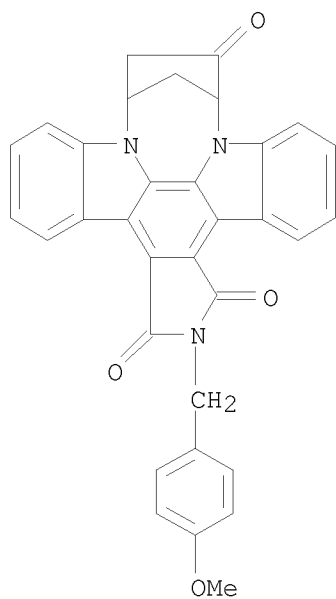


RN 253680-57-8 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



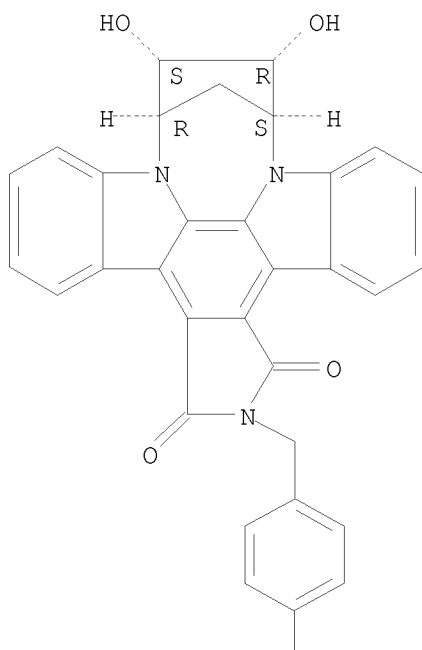
RN 253680-58-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
 11,12-dihydro-2-[(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)



RN 703405-34-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10,11-dihydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9R,10S,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



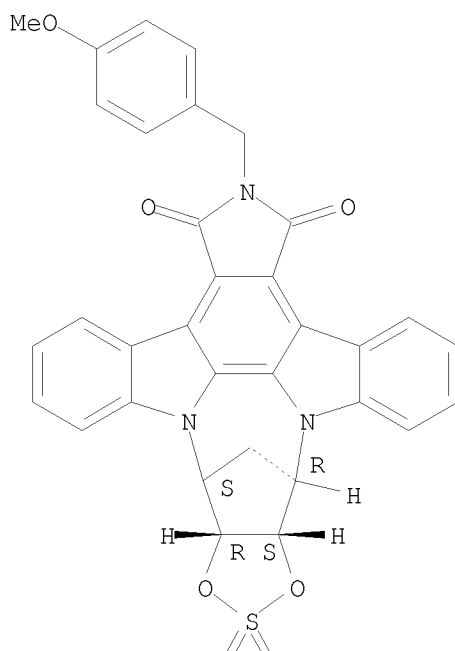
PAGE 2-A



RN 786688-05-9 CAPLUS
 CN 6,10-Methano-16H-[1,3,2]dioxathiolo[4,5-c]diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-16,18(17H)-dione,
 6,6a,9a,10-tetrahydro-17-[(4-methoxyphenyl)methyl]-, 8,8-dioxide,
 (6R,6aS,9aR,10S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

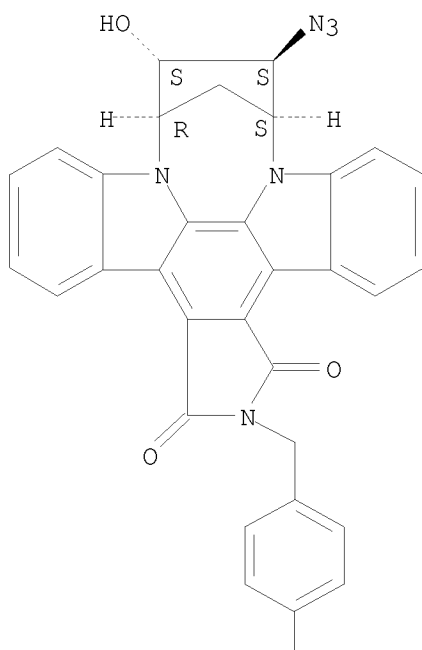


RN 786688-06-0 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-azido-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9R,10R,11R,12S)-rel- (9CI) (CA INDEX NAME)

10/532,263

Relative stereochemistry.

PAGE 1-A



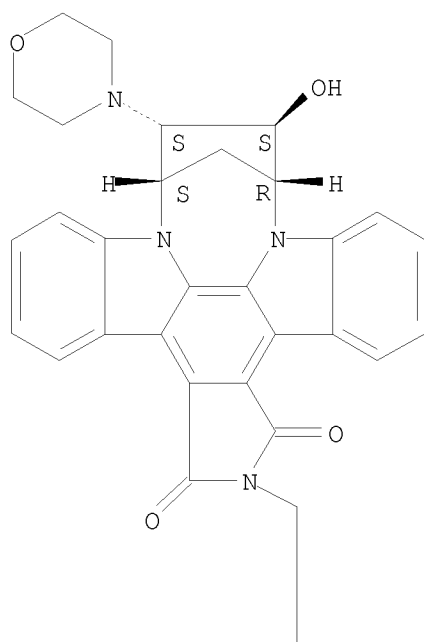
PAGE 2-A



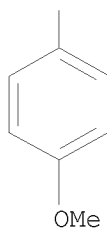
RN 786688-07-1 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-11-(4-morpholinyl)-, (9R,10S,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



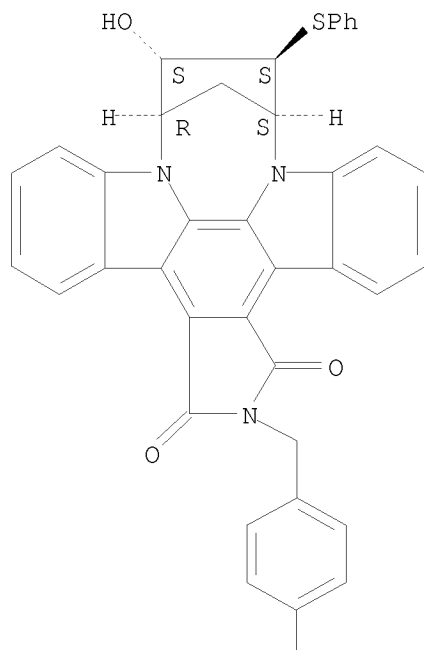
PAGE 2-A



RN 786688-09-3 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-11-(phenylthio)-, (9R,10S,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

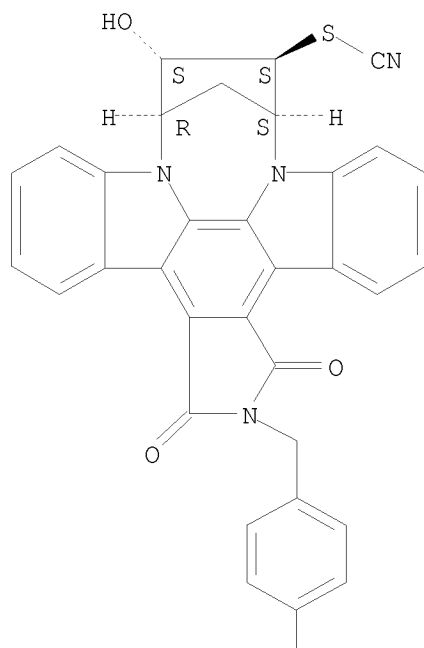


RN 786688-10-6 CAPLUS

CN Thiocyanic acid, (9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-2-
 [(4-methoxyphenyl)methyl]-1,3-dioxo-9,12-methano-1H-diindolo[1,2,3-
 fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl ester, rel- (9CI)
 (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

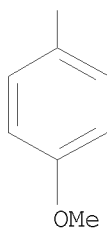
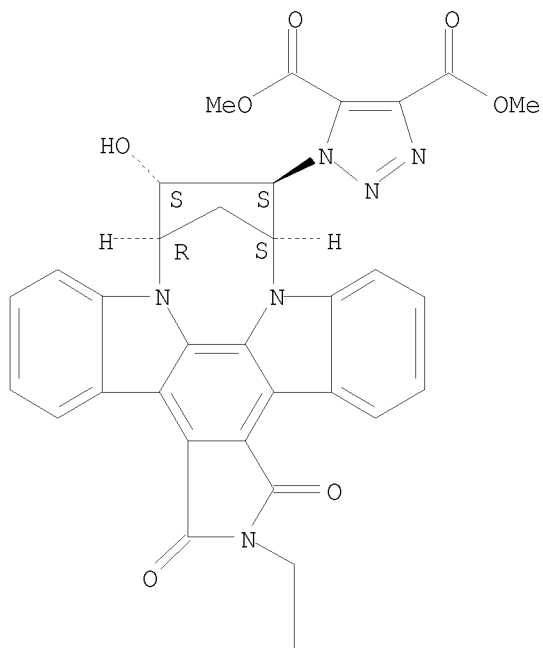


PAGE 2-A



RN 786688-12-8 CAPLUS
 CN 1H-1,2,3-Triazole-4,5-dicarboxylic acid,
 1-[(9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl]-, dimethyl ester, rel- (9CI)
 (CA INDEX NAME)

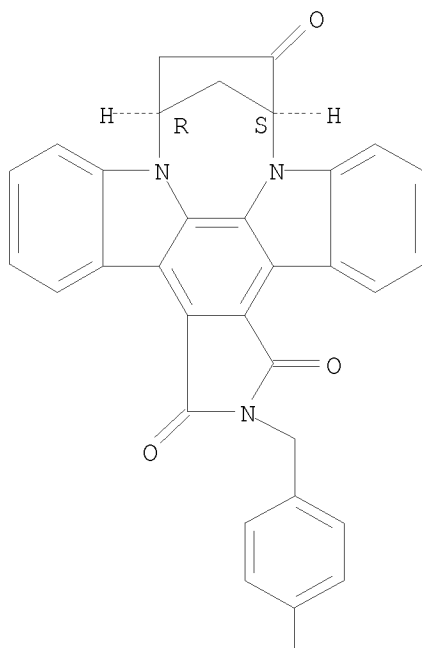
Relative stereochemistry.



RN 786688-13-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
 11,12-dihydro-2-[(4-methoxyphenyl)methyl]-, (9S,12R)- (9CI) (CA INDEX
 NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A



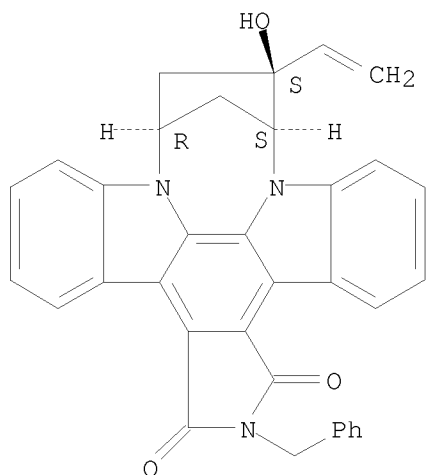
PAGE 2-A



RN 865485-69-4 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-ethenyl-9,10,11,12-tetrahydro-10-hydroxy-2-(phenylmethyl)-,
 (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

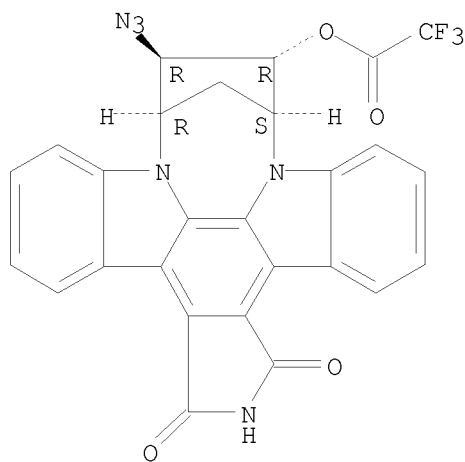
10/532,263



RN 865485-72-9 CAPLUS

CN Acetic acid, trifluoro-, (9R,10S,11S,12S)-11-azido-2,3,9,10,11,12-hexahydro-1,3-dioxo-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl ester, rel- (9CI) (CA INDEX NAME)

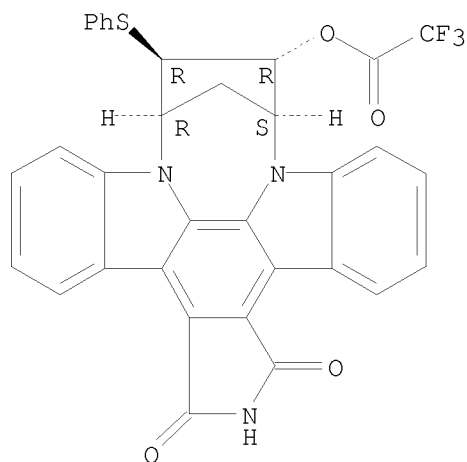
Relative stereochemistry.



RN 865485-73-0 CAPLUS

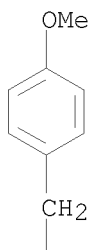
CN Acetic acid, trifluoro-, (9R,10S,11S,12S)-2,3,9,10,11,12-hexahydro-1,3-dioxo-11-(phenylthio)-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl ester, rel- (9CI) (CA INDEX NAME)

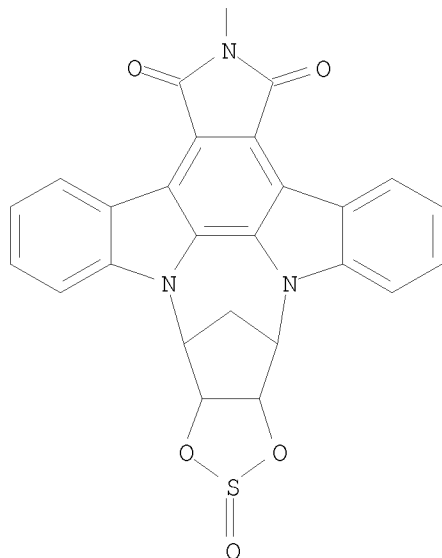
Relative stereochemistry.



RN 865606-87-7 CAPLUS
 CN 6,10-Methano-16H-[1,3,2]dioxathio[4,5-c]diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-16,18(17H)-dione, 6,6a,9a,10-tetrahydro-17-[(4-methoxyphenyl)methyl]-, 8-oxide, (6R,6aS,9aR,10S)-rel- (9CI) (CA INDEX NAME)

PAGE 1-A

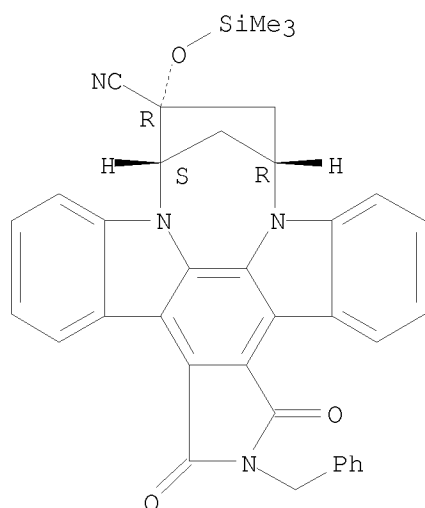




IT	233253-28-6P 233253-29-7P 703404-93-7P 703405-10-1P 786688-08-2P 786688-11-7P 786688-14-0P 865485-68-3P 865485-70-7P 865485-71-8P 865485-80-9P 865485-81-0P 865485-82-1P 865485-83-2P 865485-84-3P
	RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of functionalized indolocarbazole derivs. related to natural product K-252a using indolo[2,3-a]pyrrolo[3,4-c]carbazole dione and cis-di(bromo)cyclopentene as starting materials)
RN	233253-28-6 CAPLUS
CN	9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4- i][1,6]benzodiazocine-10-carbonitrile, 2,3,9,10,11,12-hexahydro-1,3-dioxo-2-(phenylmethyl)-10- [(trimethylsilyl)oxy]-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

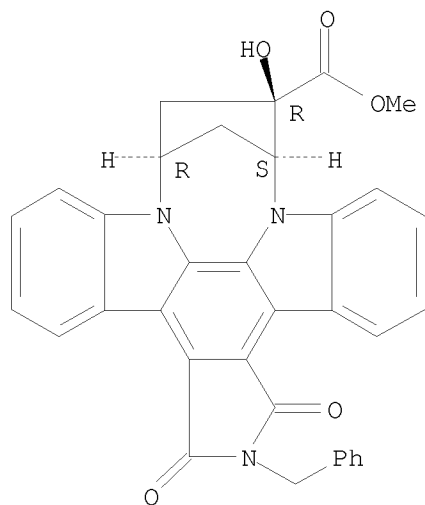
Relative stereochemistry.

10/532,263



RN 233253-29-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 2,3,9,10,11,12-hexahydro-10-hydroxy-1,3-dioxo-2-(phenylmethyl)-, methyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

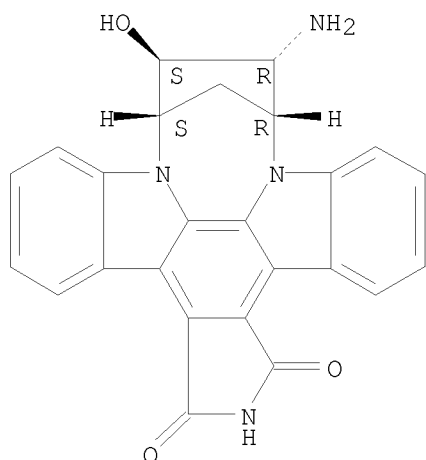
Relative stereochemistry.



RN 703404-93-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione, 10-amino-9,10,11,12-tetrahydro-11-hydroxy-, (9R,10R,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

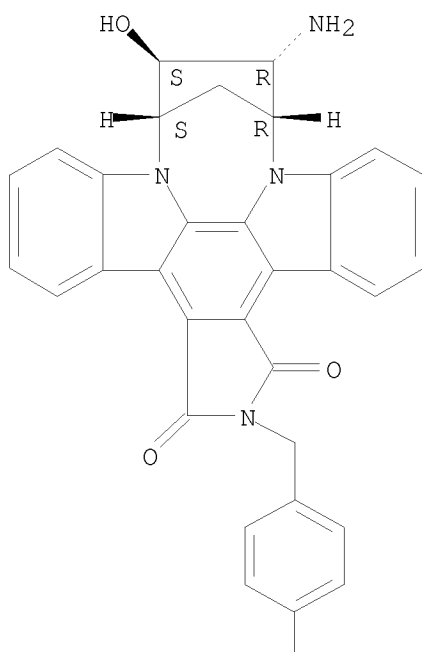
10/532,263



RN 703405-10-1 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
10-amino-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-,
(9R,10R,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



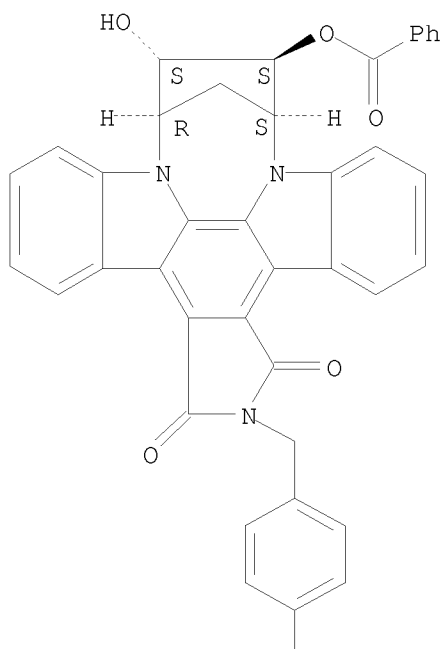
PAGE 2-A



RN 786688-08-2 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-(benzoyloxy)-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-, (9R,10R,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

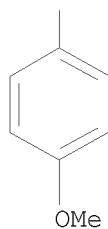
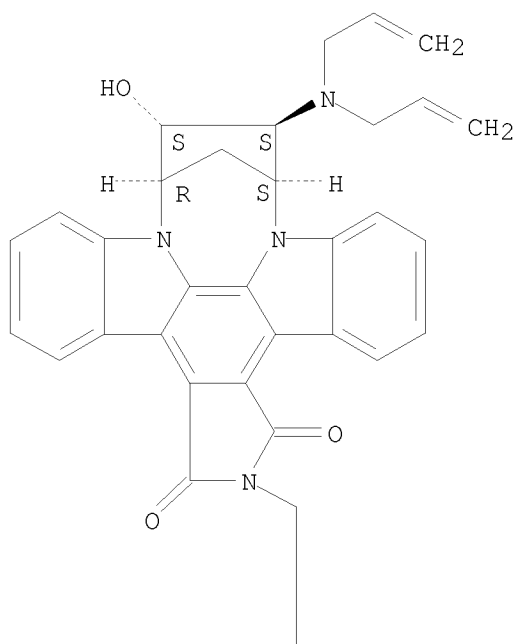


PAGE 2-A



RN 786688-11-7 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-(di-2-propenylamino)-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-, (9R,10R,11R,12S)-rel- (9CI) (CA INDEX NAME)

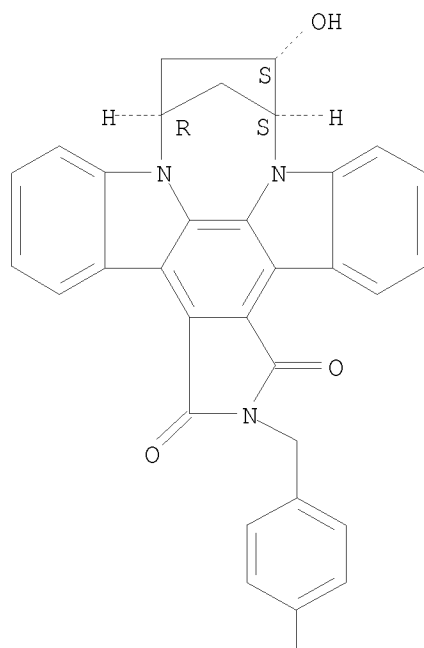
Relative stereochemistry.



RN 786688-14-0 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9S,10S,12R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A



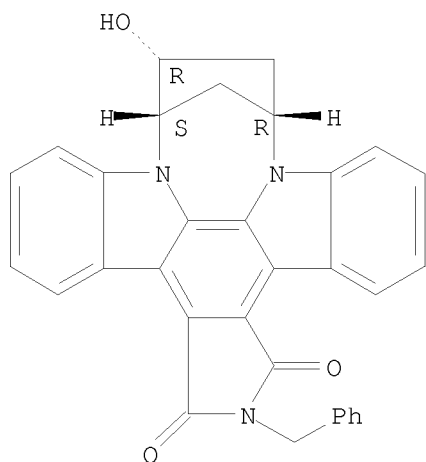
PAGE 2-A



RN 865485-68-3 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-(phenylmethyl)-, (9R,10S,12S)-rel-
 (9CI) (CA INDEX NAME)

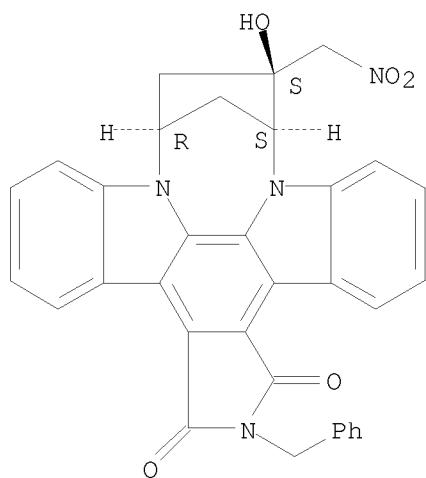
Relative stereochemistry.

10/532,263



RN 865485-70-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-hydroxy-10-(nitromethyl)-2-(phenylmethyl)-,
(9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

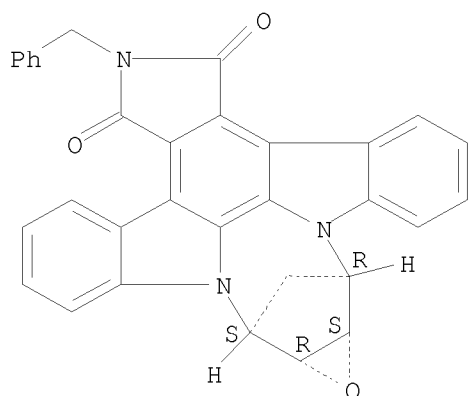
Relative stereochemistry.



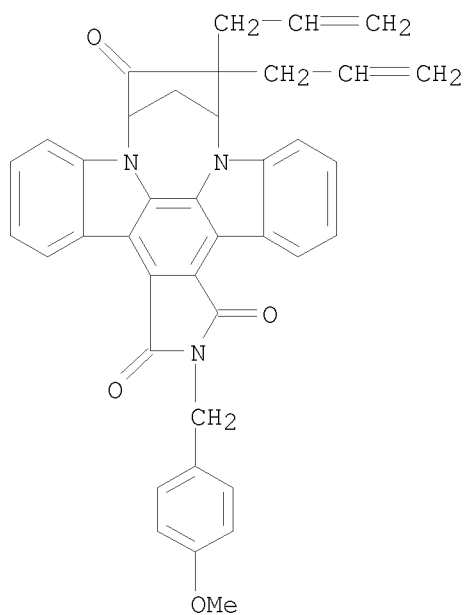
RN 865485-71-8 CAPLUS
CN 6,8-Methano-14H-diindolo[1,2,3-fg:3',2',1'-kl]oxireno[c]pyrrolo[3,4-i][1,6]benzodiazocine-14,16(15H)-dione,
6,6a,7a,8-tetrahydro-15-(phenylmethyl)-, (6R,6aS,7aR,8S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

10/532,263

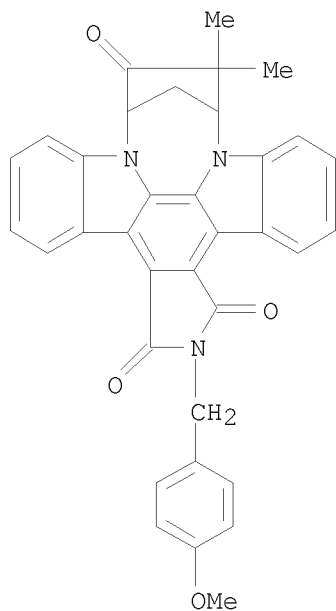


RN 865485-80-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
 11,12-dihydro-2-[(4-methoxyphenyl)methyl]-11,11-di-2-propenyl- (9CI) (CA
 INDEX NAME)



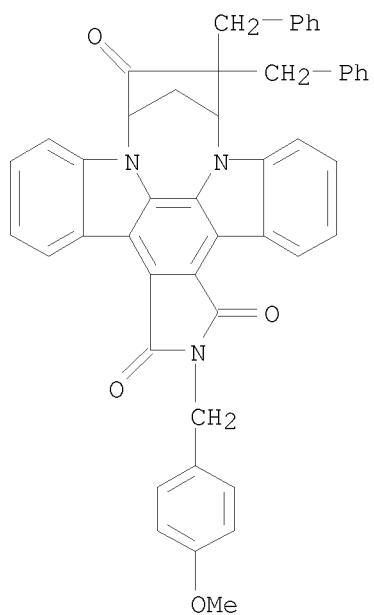
RN 865485-81-0 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
 11,12-dihydro-2-[(4-methoxyphenyl)methyl]-11,11-dimethyl- (9CI) (CA INDEX
 NAME)

10/532,263



RN 865485-82-1 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione, 11,12-dihydro-2-[(4-methoxyphenyl)methyl]-11,11-bis(phenylmethyl)- (9CI)
(CA INDEX NAME)



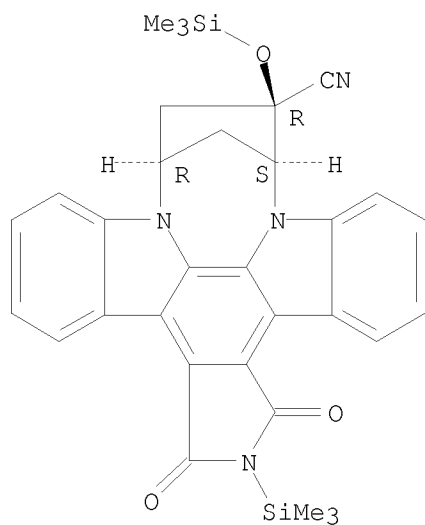
RN 865485-83-2 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile,

10/532,263

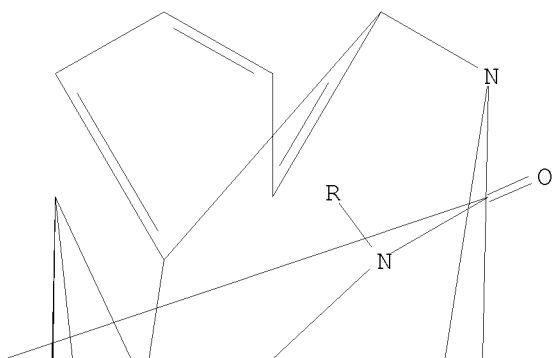
2,3,9,10,11,12-hexahydro-1,3-dioxo-2-(trimethylsilyl)-10-
[(trimethylsilyl)oxy]-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 865485-84-3 CAPLUS
CN 6,8-Methano-14H-diindolo[1,2,3-fg:3',2',1'-kl]oxireno[c]pyrrolo[3,4-
i][1,6]benzodiazocine-14,16(15H)-dione,
6,6a,7a,8-tetrahydro-15-[(4-methoxyphenyl)methyl]-, (6R,6aS,7aR,8S)-rel-
(9CI) (CA INDEX NAME)

Relative stereochemistry.

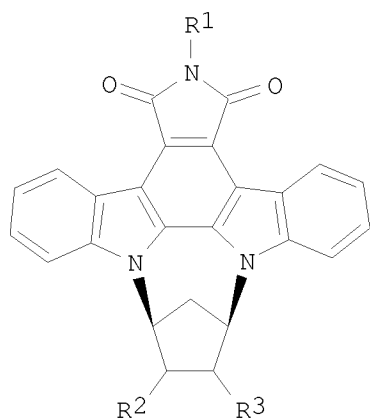


* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

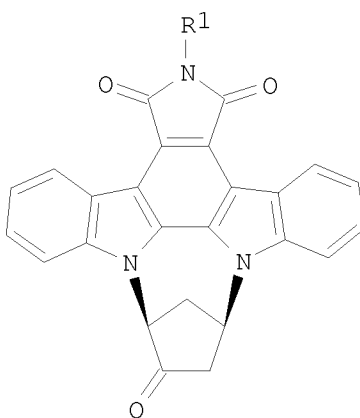
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

REFERENCE COUNT: 85 THERE ARE 85 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:745005 CAPLUS
 DOCUMENT NUMBER: 141:395536
 TITLE: Synthesis of bioactive indolocarbazoles: synthesis,
 nucleophilic ring-opening and chiral base
 desymmetrisation of a cyclic sulfate intermediate
 AUTHOR(S): Nichols, Christopher J.; Simpkins, Nigel S.
 CORPORATE SOURCE: School of Chemistry, University of Nottingham,
 University Park, NG7 2RD, UK
 SOURCE: Tetrahedron Letters (2004), 45(40), 7469-7473
 CODEN: TELEAY; ISSN: 0040-4039
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 141:395536
 GI



I



II

AB A number of new functionalized bridged indolocarbazoles I (R1 = 4-MeOC6H4CH2; R2 = N3, H2N, 4-morpholinyl, PhCO2, PhS, SCN, etc.) has been prepared by ring-opening reactions of a key cyclic sulfate intermediate I (R2R3 = OSO2O), prepared from the corresponding diol (R2 = R3 = HO) by treatment with sulfonyl diimidazole and DBU. The same cyclic sulfate also undergoes an unprecedented asym. rearrangement to a chiral ketone II, on treatment with a chiral lithium amide base.

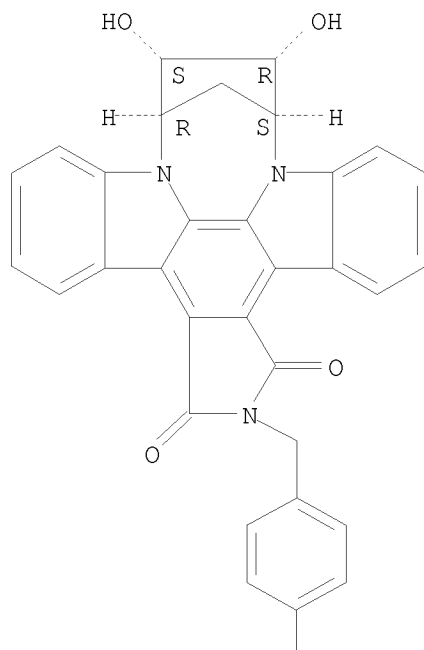
IT 703405-34-9P 786688-05-9P 786688-06-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of functionalized bridged indolocarbazoles via nucleophilic ring-opening and chiral base desymmetrisation of cyclic sulfate derivative)

RN 703405-34-9 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10,11-dihydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9R,10S,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

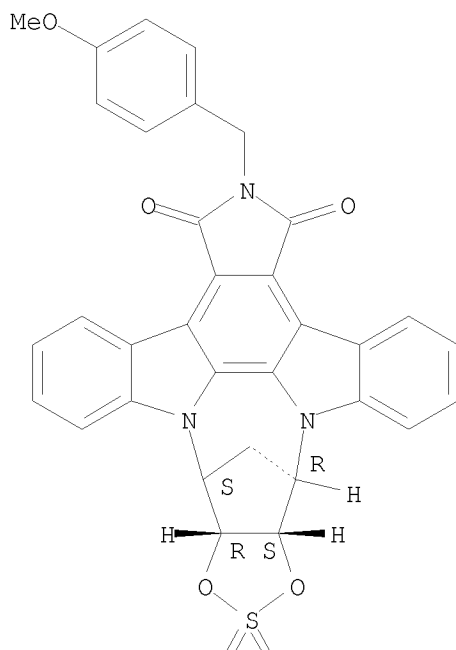


RN 786688-05-9 CAPLUS

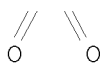
CN 6,10-Methano-16H-[1,3,2]dioxathiolo[4,5-c]diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-16,18(17H)-dione, 6,6a,9a,10-tetrahydro-17-[(4-methoxyphenyl)methyl]-, 8,8-dioxide, (6R,6aS,9aR,10S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



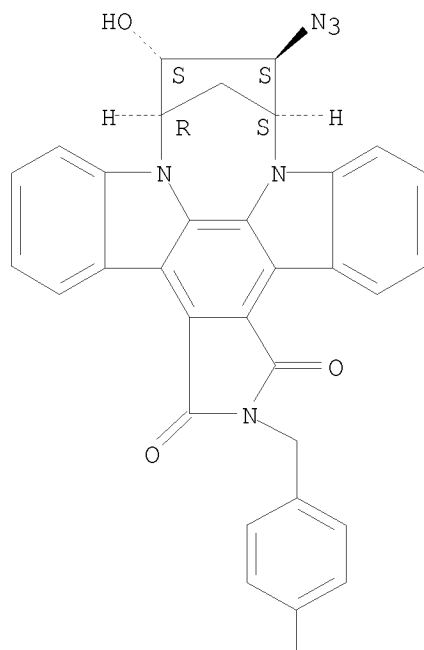
PAGE 2-A



RN 786688-06-0 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-azido-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9R,10R,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



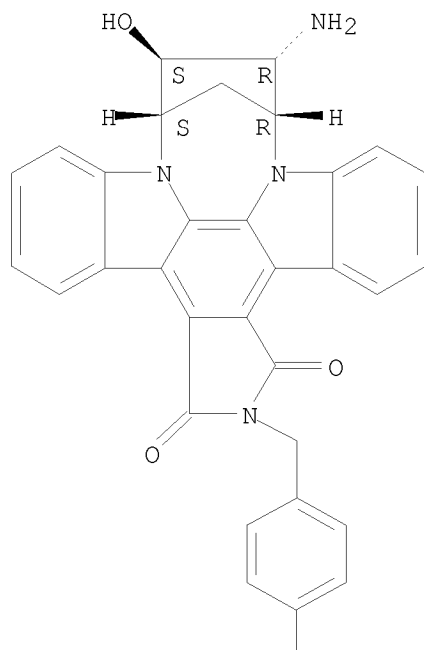
PAGE 2-A



IT 703405-10-1P 786688-07-1P 786688-08-2P
 786688-09-3P 786688-10-6P 786688-11-7P
 786688-12-8P 786688-13-9P 786688-14-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of functionalized bridged indolocarbazoles via nucleophilic
 ring-opening and chiral base desymmetrisation of cyclic sulfate derivative)
 RN 703405-10-1 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
 i][1,6]benzodiazocine-1,3(2H)-dione,
 10-amino-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9R,10R,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



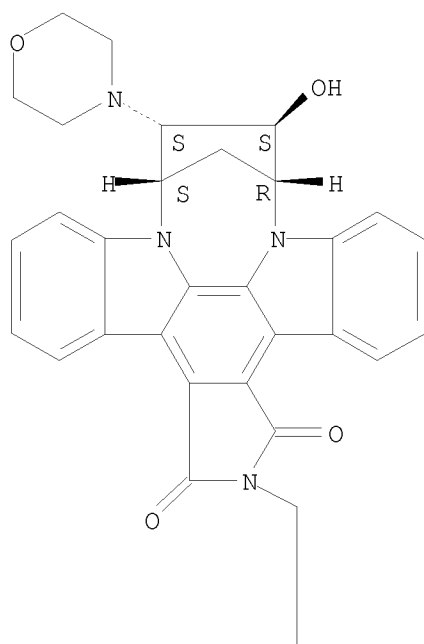
PAGE 2-A



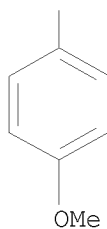
RN 786688-07-1 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-11-(4-morpholinyl)-, (9R,10S,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



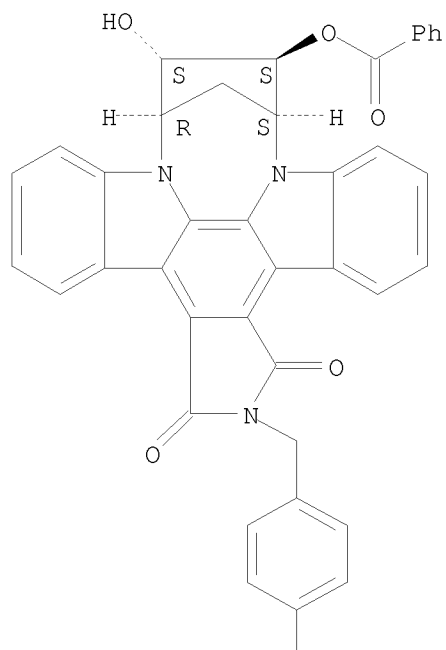
PAGE 2-A



RN 786688-08-2 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-(benzoyloxy)-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-, (9R,10R,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



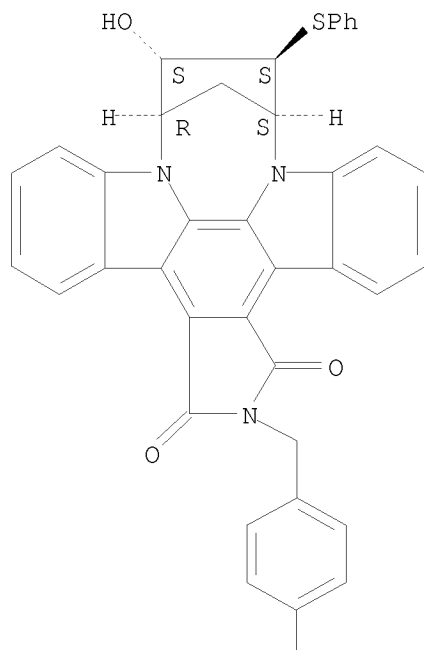
PAGE 2-A



RN 786688-09-3 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-11-(phenylthio)-, (9R,10S,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

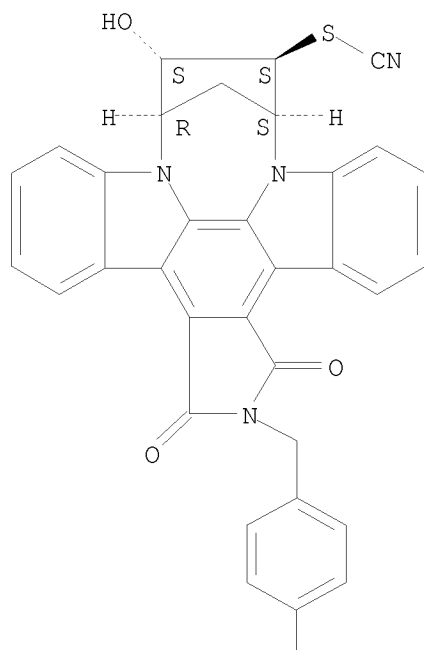


RN 786688-10-6 CAPLUS

CN Thiocyanic acid, (9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-2-
 [(4-methoxyphenyl)methyl]-1,3-dioxo-9,12-methano-1H-diindolo[1,2,3-
 fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl ester, rel- (9CI)
 (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



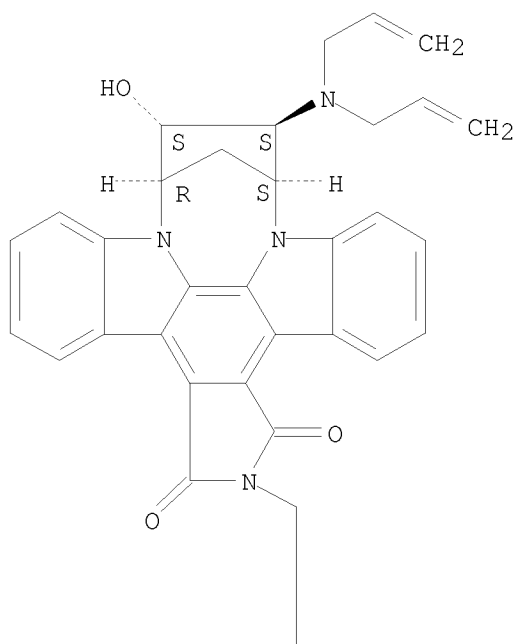
PAGE 2-A



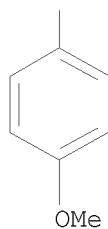
RN 786688-11-7 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-(di-2-propenylamino)-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-, (9R,10R,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

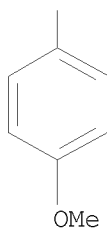
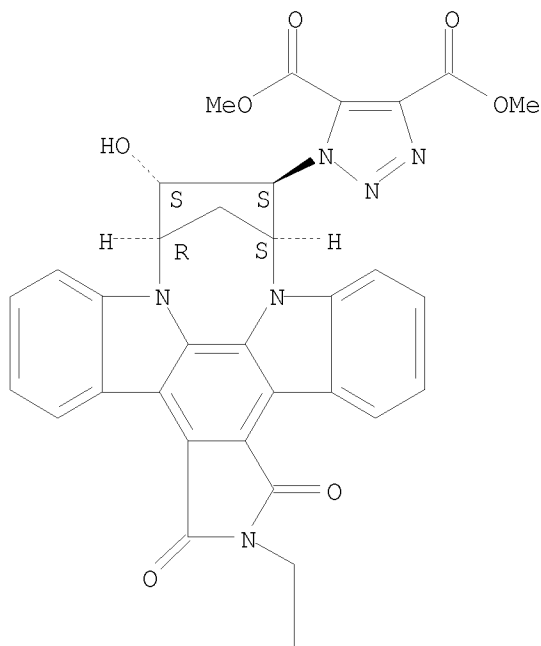


PAGE 2-A



RN 786688-12-8 CAPLUS
 CN 1H-1,2,3-Triazole-4,5-dicarboxylic acid,
 1-[(9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl]-, dimethyl ester, rel- (9CI)
 (CA INDEX NAME)

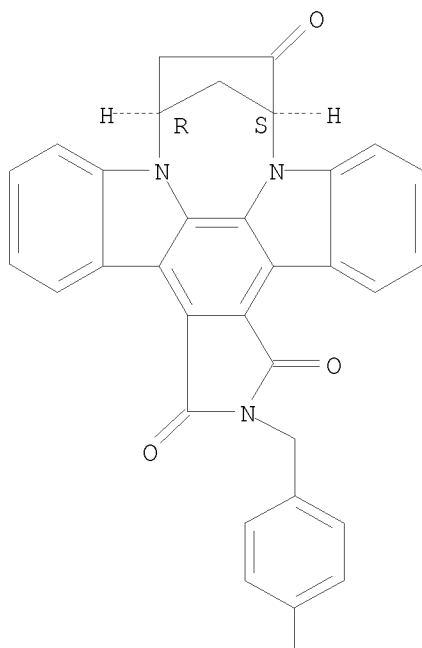
Relative stereochemistry.



RN 786688-13-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
 11,12-dihydro-2-[(4-methoxyphenyl)methyl]-, (9S,12R)- (9CI) (CA INDEX
 NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A

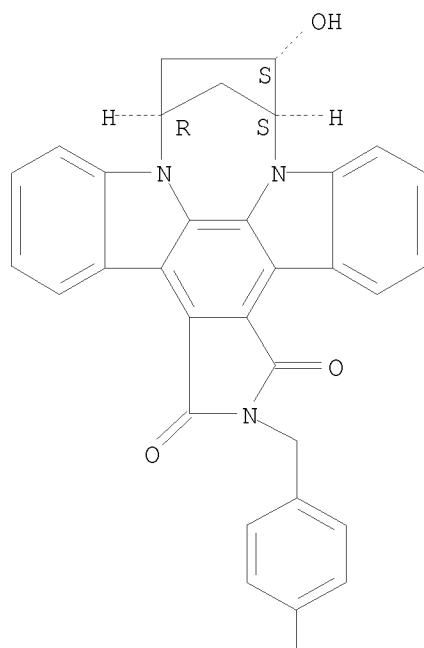


PAGE 2-A



RN 786688-14-0 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9S,10S,12R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT:

24

THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:467897 CAPLUS

DOCUMENT NUMBER: 141:38635

TITLE: Preparation of N,N-bridged, nitrogen-substituted carbacyclic indolocarbazoles for use in pharmaceutical compositions as protein kinase inhibitors

INVENTOR(S): Monse, Barbara; Braxmeier, Tobias; Ferrand, Sandrine; Gordon, Sandra; Klafki, Hans; Lahu, Gezim; Roder, Hanno; Sahagun-Krause, Heidi; Seneci, Pierfausto; Thillaye du Boullay, Olivier

PATENT ASSIGNEE(S): Nad A.-G., Germany

SOURCE: PCT Int. Appl., 89 pp.

CODEN: PIXXD2

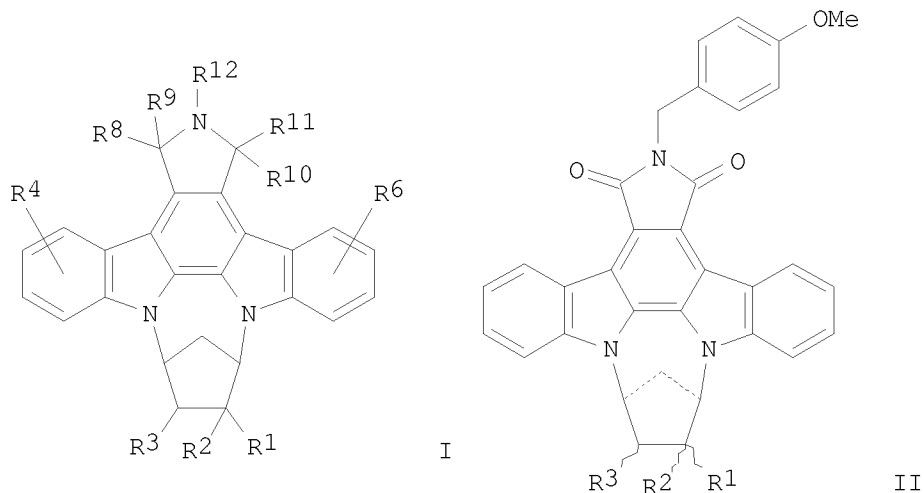
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004048384	A1	20040610	WO 2003-EP13322	20031126
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10255343	A1	20040617	DE 2002-10255343	20021127
DE 10255343	B4	20060907		
CA 2502200	A1	20040610	CA 2003-2502200	20031126
AU 2003288180	A1	20040618	AU 2003-288180	20031126
EP 1565473	A1	20050824	EP 2003-780067	20031126
EP 1565473	B1	20060802		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006517519	T	20060727	JP 2004-554496	20031126
AT 334984	T	20060815	AT 2003-780067	20031126
US 20070149481	A1	20070628	US 2007-532263	20070130
PRIORITY APPLN. INFO.:			DE 2002-10255343	A 20021127
			WO 2003-EP13322	W 20031126
OTHER SOURCE(S):	MARPAT 141:38635			
GI				



- AB This invention relates to the preparation of novel carbacyclic indolocarbazoles, such as I [R1 = NR13R14; R2 = H, CN, alkyl, aryl, heteroaryl, acyl, carboxy, carboxamido; R1R2 = spiro nitrogen containing heterocycle, such as spirohydantoyl; R3 = H, OR13, OCOR13, OCONHR13, OCONR13R14; R1R3 = fused heterocycle, such as -OSO2O-, and R2 = H; R4, R6 = H, CN, halogen, alkyl, alkenyl, alkynyl, aryl, heteroaryl, alkoxy, acyl, carboxy, carboxamido, etc.; R8R9, R10R11 = H2, O, S; R8 = H, R9 = OH; R10 = H, R11 = OH; R12 = H, alkyl, cycloalkyl, benzyl aryl heteroaryl, acyl, carboxy, etc.; R13, R14 = H, alkyl, cycloalkyl, acyl, aryl, etc.], for therapeutic use as protein kinase inhibitors with advantageous pharmaceutical properties. These indolocarbazoles are claimed for use in the treatment of CNS diseases, non-insulin-dependent diabetes mellitus, acute stroke and other neuro-traumatic injuries, diabetes mellitus, malignant diseases, diseases caused by malfunctioning of specific signaling pathways and neurodegenerative diseases, such as Alzheimer's disease. Thus, indolocarbazole II (R1 = β -NH2, R2 = α -H, R3 = H) was prepared starting from cyclopentadiene, 4-methoxybenzyl amine, dichloromaleic anhydride, and indole via a multistep synthetic sequence which included a reaction of 12,13-dihydro-6-[(4-methoxyphenyl)methyl]-5H-indolo[2,3-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione with cis-3,5-dibromocyclopentene using NaH in THF to form II (R1R3 = bond, R2 = H) in 90.4% yield. II (R1R3 = bond, R2 = H), which contains the target ring skeleton, further underwent an hydroxylation sequence using BH2.THF followed by NaOH and H2O2 to form alc. II (R1 = α -OH, R2 = β -H, R3 = H), oxidation of the alc. to the corresponding ketone II (R1R2 = O, R3 = H), reaction of the ketone with benzylamine to give N-benzyl amine II (R1 = β -NHCH2Ph, R2 = α -H, R3 = H) and, finally, N-debenzylation to give the desired indolocarbazole II (R1 = β -NH2, R2 = α -H, R3 = H). The prepared indolocarbazoles were assayed for inhibiting the activity of a group of protein kinases consisting of extracellular signal regulated kinase 2 (ERK2), protein kinase A (PKA), protein kinase C (PKC) and glycogen synthase kinase 3 β (GSK3 β).
- IT 703404-81-3P 703404-82-4P 703404-84-6P
 703404-90-4P 703404-92-6P 703404-94-8P
 703404-97-1P 703404-98-2P 703404-99-3P
 703405-03-2P 703405-05-4P 703405-11-2P

10/532,263

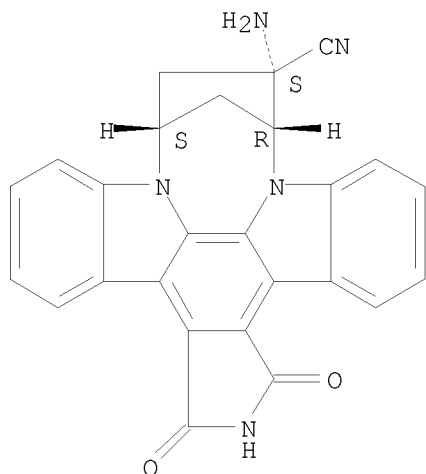
703405-12-3P 703405-17-8P 703405-18-9P
703405-19-0P 703405-20-3P 703405-21-4P
704915-60-6P, NAD 0241

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of N,N-bridged, nitrogen-substituted carbacyclic indolocarbazoles for use in pharmaceutical compns. as protein kinase inhibitors)

RN 703404-81-3 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile,
10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

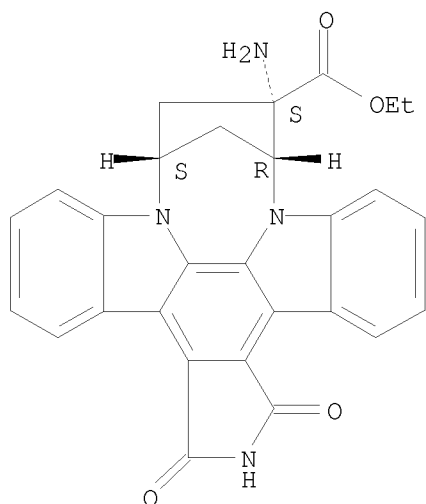
Relative stereochemistry.



RN 703404-82-4 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, ethyl ester,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

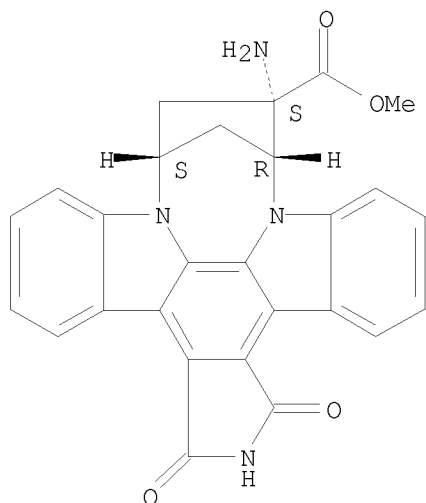
Relative stereochemistry.



RN 703404-84-6 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, methyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

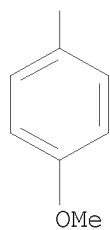
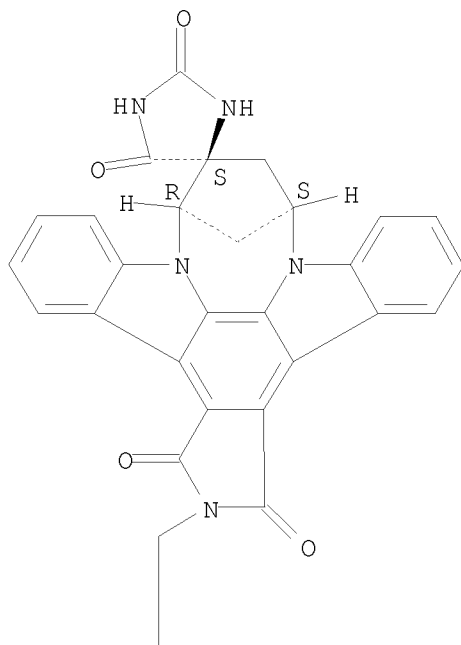
Relative stereochemistry.



RN 703404-90-4 CAPLUS

CN Spiro[imidazolidine-4,10'-(9'H)]-[9,12]methano[1H]diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1',2,3',5(2'H)-tetrone, 11',12'-dihydro-2'-[(4-methoxyphenyl)methyl]-, (4R,9'S,12'R)-rel- (9CI) (CA INDEX NAME)

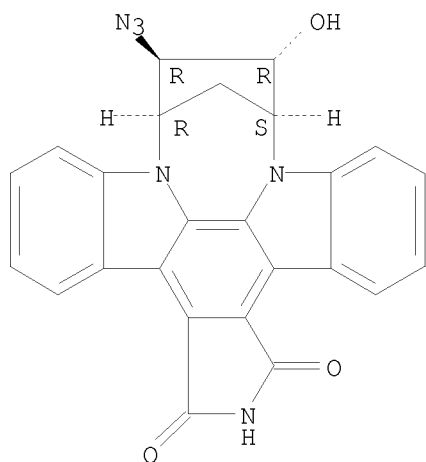
Relative stereochemistry.



RN 703404-92-6 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-azido-9,10,11,12-tetrahydro-11-hydroxy-, (9R,10R,11R,12S)-rel- (9CI)
 (CA INDEX NAME)

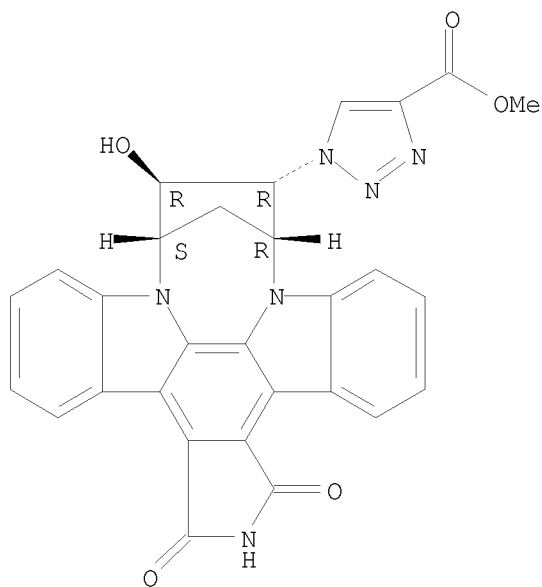
Relative stereochemistry.

10/532,263



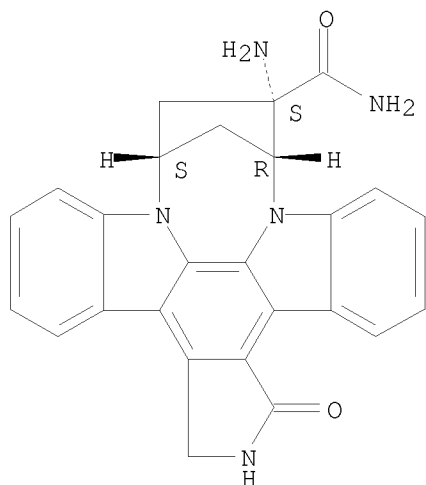
RN 703404-94-8 CAPLUS
CN 1H-1,2,3-Triazole-4-carboxylic acid,
1-[(9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-1,3-dioxo-9,12-
methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-
10-yl]-, methyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 703404-97-1 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-3-oxo-, (9R,10S,12S)-rel- (9CI) (CA
INDEX NAME)

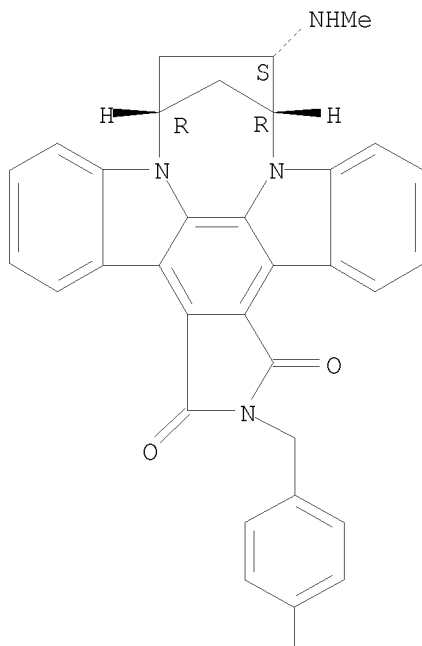
Relative stereochemistry.



RN 703404-98-2 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-10-(methylamino)-,
 (9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



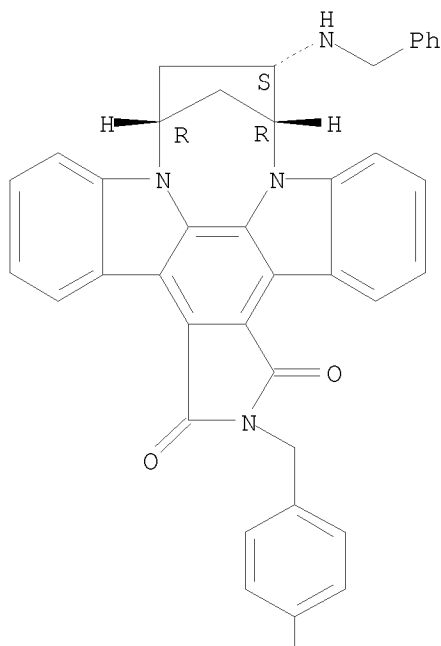
PAGE 2-A



RN 703404-99-3 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-10-[(phenylmethyl)amino]-
 , (9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



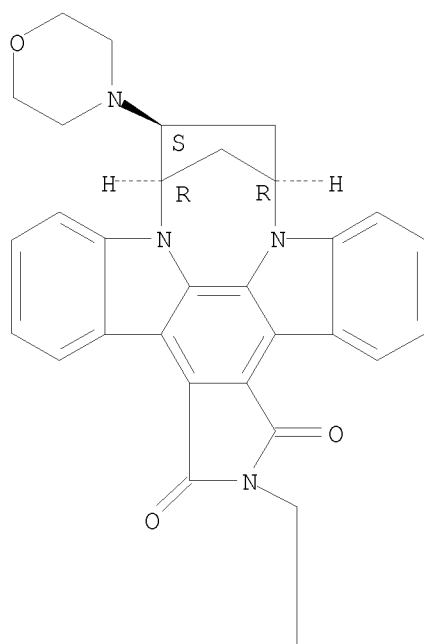
PAGE 2-A



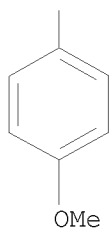
RN 703405-03-2 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-10-(4-morpholinyl)-,
 (9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



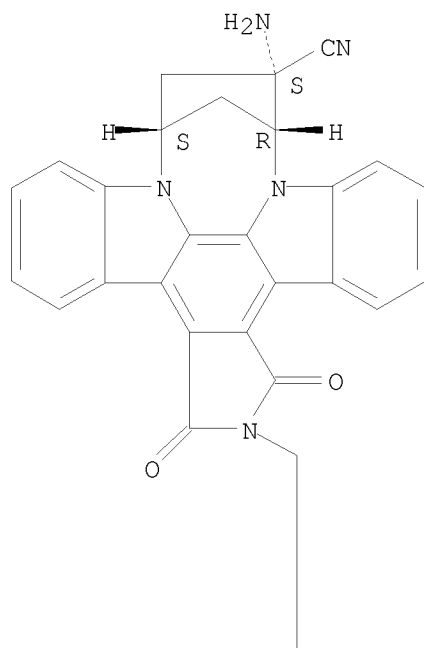
PAGE 2-A



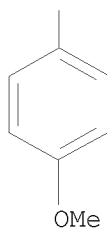
RN 703405-05-4 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile,
 10-amino-2,3,9,10,11,12-hexahydro-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-,
 (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



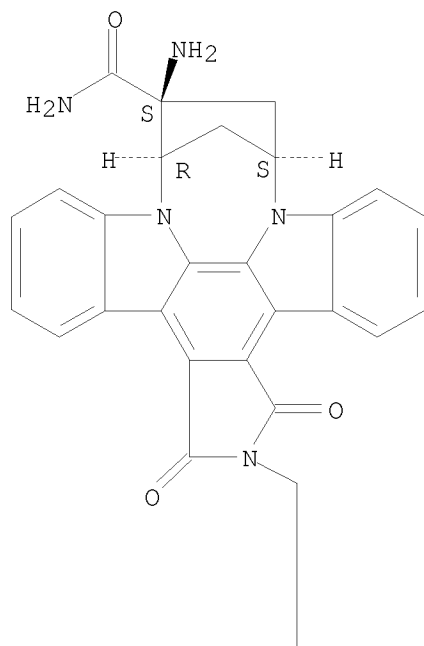
PAGE 2-A



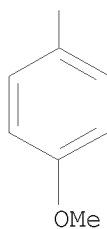
RN 703405-11-2 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
 10-amino-2,3,9,10,11,12-hexahydro-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-,
 (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



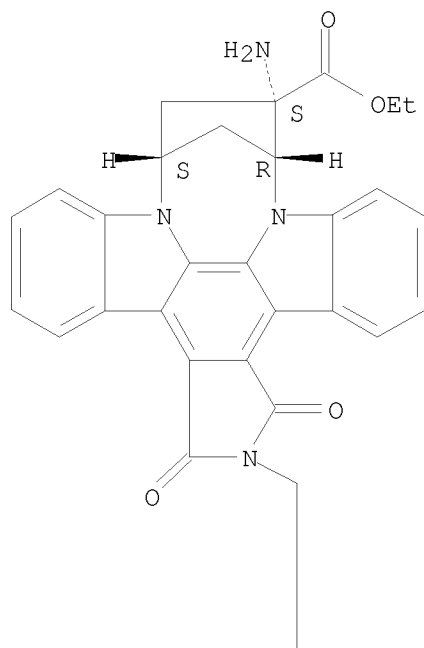
PAGE 2-A



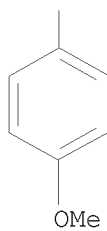
RN 703405-12-3 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
 10-amino-2,3,9,10,11,12-hexahydro-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-,
 ethyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



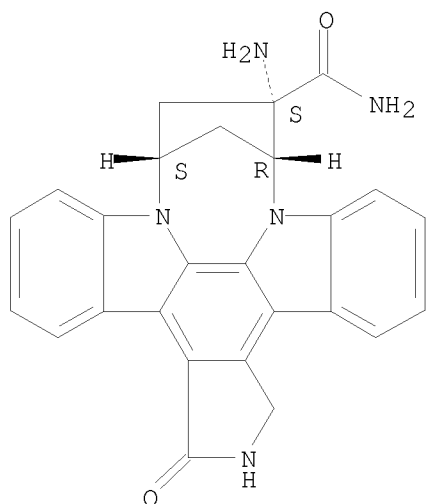
PAGE 2-A



RN 703405-17-8 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
 10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, (9R,10S,12S)-rel- (9CI) (CA
 INDEX NAME)

Relative stereochemistry.

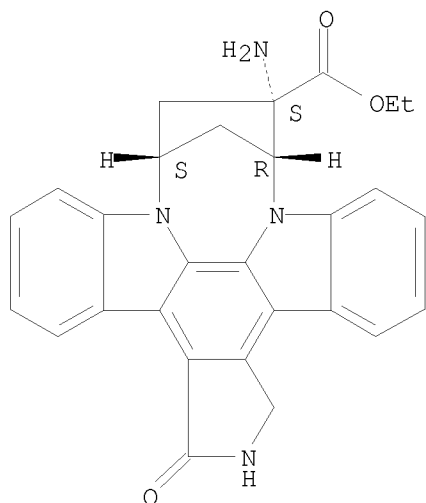
10/532,263



RN 703405-18-9 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, ethyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

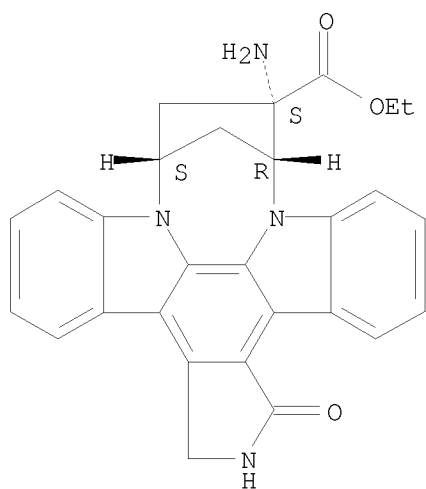


RN 703405-19-0 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 10-amino-2,3,9,10,11,12-hexahydro-3-oxo-, ethyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

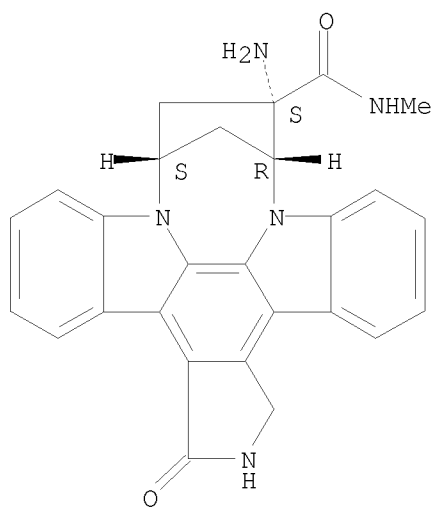
Relative stereochemistry.

10/532,263



RN 703405-20-3 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1-oxo-, (9R,10S,12S)-rel- (9CI)
(CA INDEX NAME)

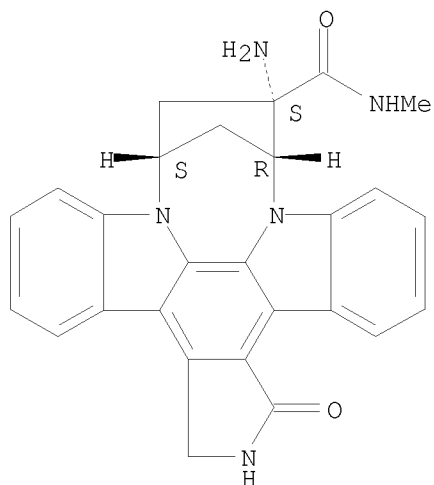
Relative stereochemistry.



RN 703405-21-4 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-methyl-3-oxo-, (9R,10S,12S)-rel- (9CI)
(CA INDEX NAME)

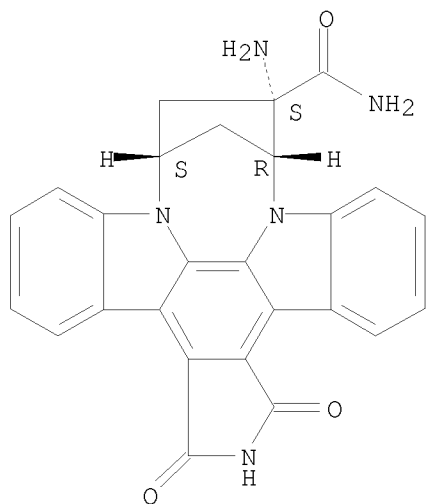
Relative stereochemistry.

10/532,263



RN 704915-60-6 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, (9R,10S,12S)-rel- (9CI) (CA
INDEX NAME)

Relative stereochemistry.



IT 703404-78-8P 703404-79-9P 703404-80-2P
703404-83-5P 703404-86-8P 703404-87-9P
703404-88-0P 703404-89-1P 703404-91-5P
703404-93-7P 703404-95-9P 703404-96-0P
703405-00-9P 703405-01-0P 703405-02-1P
703405-04-3P 703405-06-5P 703405-07-6P
703405-08-7P 703405-09-8P 703405-10-1P
703405-13-4P 703405-14-5P 703405-15-6P
703405-16-7P 703405-22-5P 703405-23-6P

10/532,263

703405-24-7P 703405-25-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

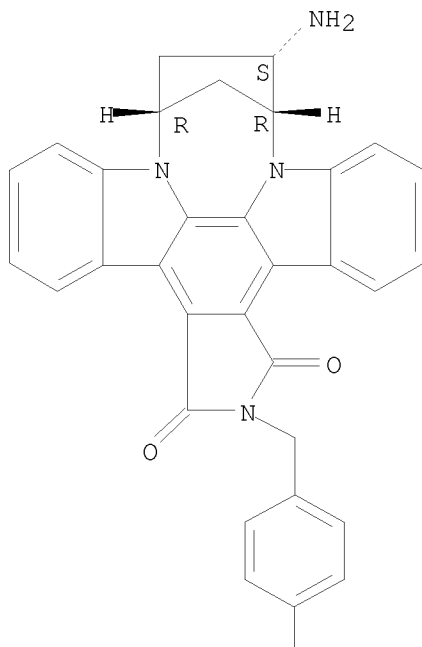
(preparation of N,N-bridged, nitrogen-substituted carbacyclic indolocarbazoles for use in pharmaceutical compns. as protein kinase inhibitors)

RN 703404-78-8 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione, 10-amino-9,10,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-, (9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

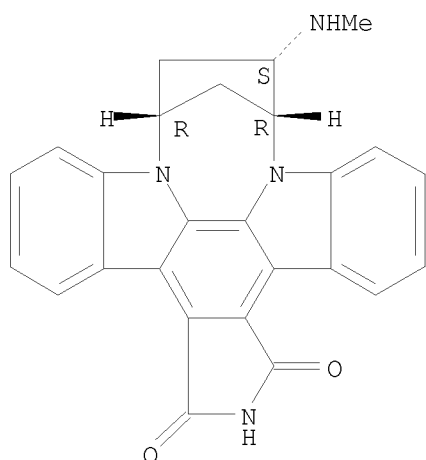


RN 703404-79-9 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione, 9,10,11,12-tetrahydro-10-(methylamino)-, (9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

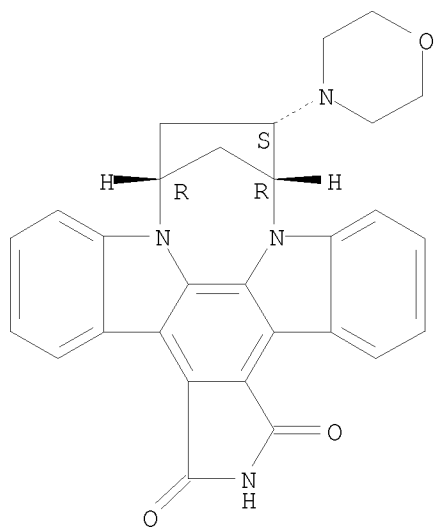
Relative stereochemistry.

10/532,263



RN 703404-80-2 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-(4-morpholinyl)-, (9R,10S,12R)-rel- (9CI) (CA
INDEX NAME)

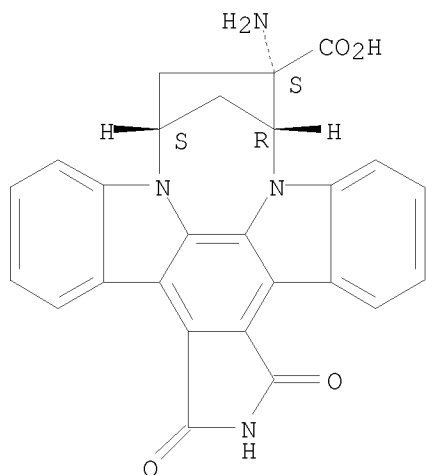
Relative stereochemistry.



RN 703404-83-5 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, (9R,10S,12S)-rel- (9CI) (CA
INDEX NAME)

Relative stereochemistry.

10/532,263

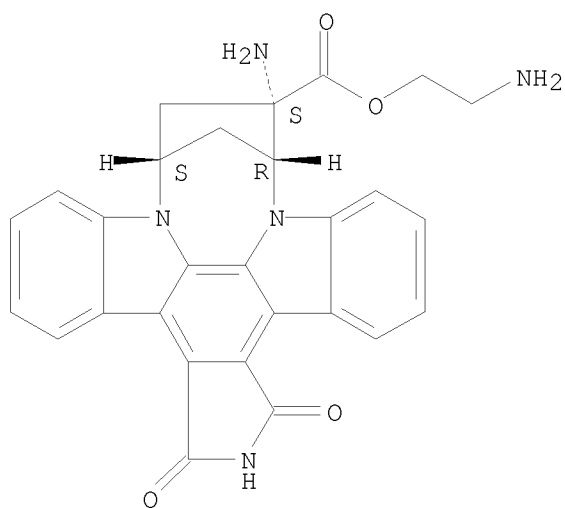


RN 703404-86-8 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, 2-aminoethyl ester,
(9R,10S,12S)-rel-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 703404-85-7
CMF C28 H23 N5 O4

Relative stereochemistry.

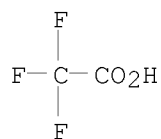


CM 2

CRN 76-05-1

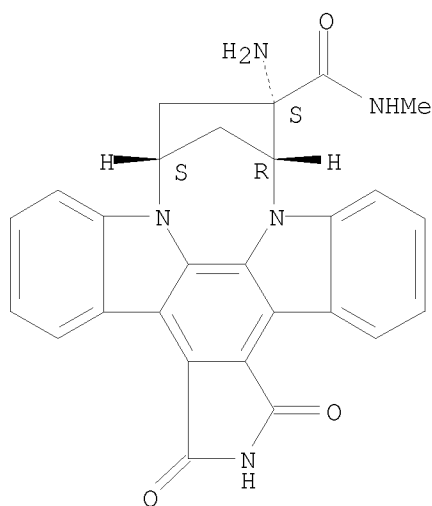
10/532,263

CMF C2 H F3 O2



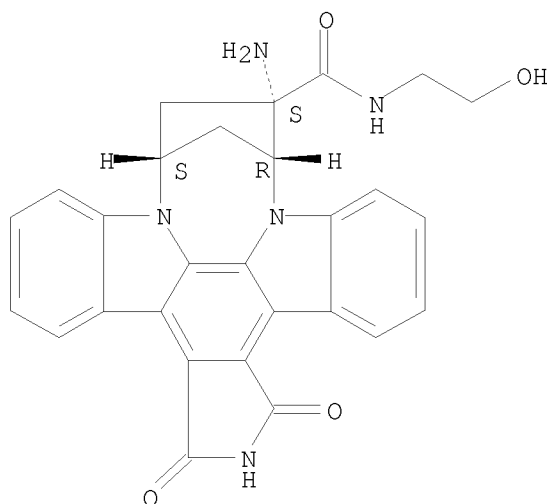
RN 703404-87-9 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1,3-dioxo-, (9R,10S,12S)-rel-
(9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 703404-88-0 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-(2-hydroxyethyl)-1,3-dioxo-,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

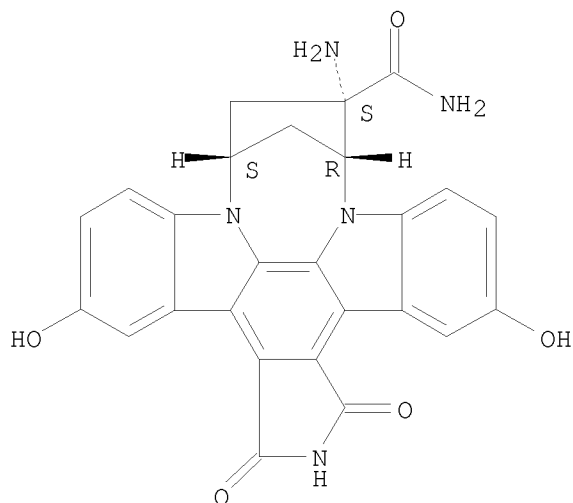
Relative stereochemistry.



RN 703404-89-1 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-5,16-dihydroxy-1,3-dioxo-,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

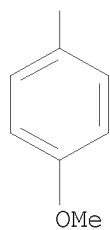
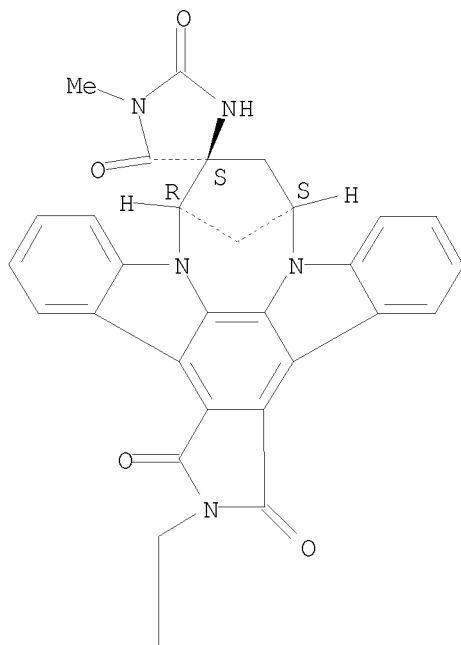
Relative stereochemistry.



RN 703404-91-5 CAPLUS

CN Spiro[imidazolidine-4,10'-(9'H)]-[9,12]methano[1H]diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1',2,3',5(2'H)-tetrone,
11',12'-dihydro-2'-[(4-methoxyphenyl)methyl]-1-methyl-, (4R,9'S,12'R)-rel-
(9CI) (CA INDEX NAME)

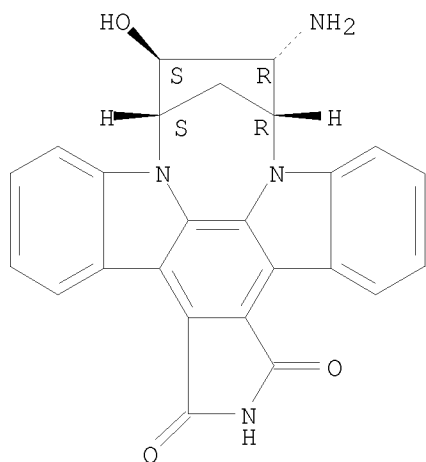
Relative stereochemistry.



RN 703404-93-7 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-amino-9,10,11,12-tetrahydro-11-hydroxy-, (9R,10R,11S,12S)-rel- (9CI)
 (CA INDEX NAME)

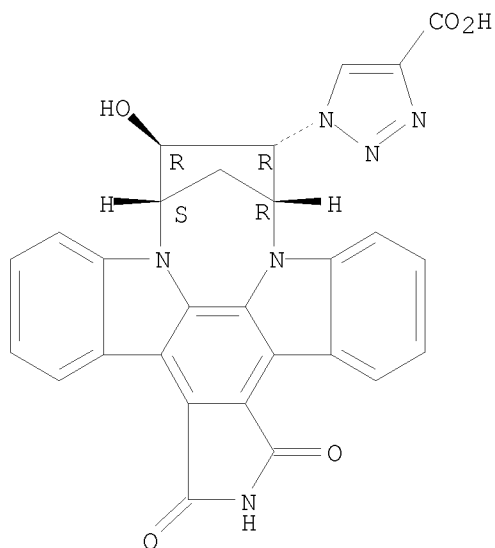
Relative stereochemistry.

10/532,263



RN 703404-95-9 CAPLUS
CN 1H-1,2,3-Triazole-4-carboxylic acid,
1-[(9R,10R,11R,12S)-2,3,9,10,11,12-hexahydro-11-hydroxy-1,3-dioxo-9,12-
methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-
10-yl]-, rel- (9CI) (CA INDEX NAME)

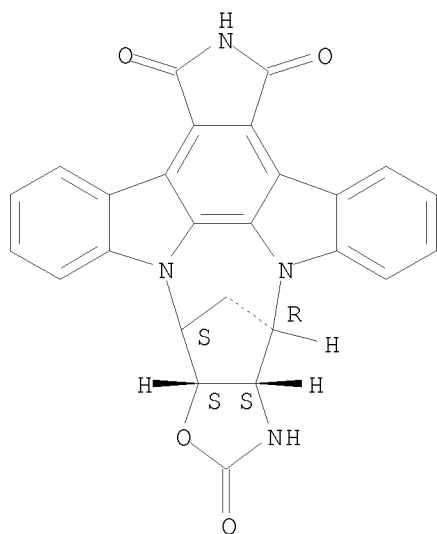
Relative stereochemistry.



RN 703404-96-0 CAPLUS
CN 6,10-Methano-16H-diindolo[1,2,3-fg:3',2',1'-kl]oxazolo[4,5-c]pyrrolo[3,4-
i][1,6]benzodiazocine-8,16,18(9H,17H)-trione, 6,6a,9a,10-tetrahydro-,
(6R,6aR,9aR,10S)-rel- (9CI) (CA INDEX NAME)

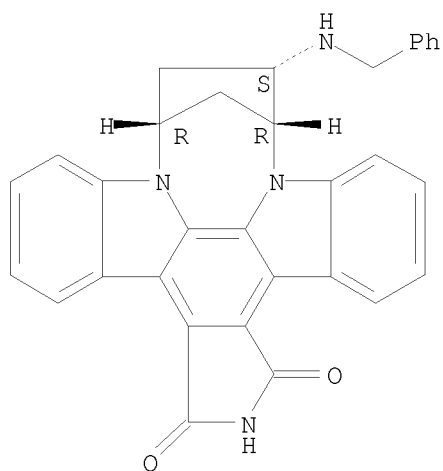
Relative stereochemistry.

10/532,263



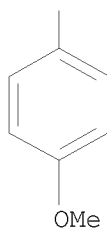
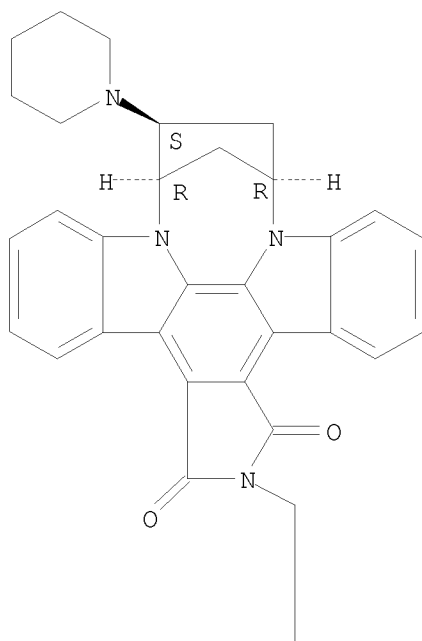
RN 703405-00-9 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-[(phenylmethyl)amino]-, (9R,10S,12R)-rel- (9CI)
(CA INDEX NAME)

Relative stereochemistry.



RN 703405-01-0 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-10-(1-piperidinyl)-,
(9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

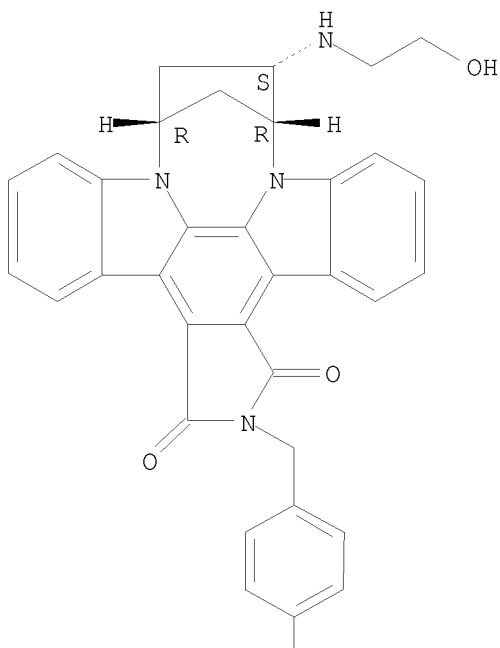
Relative stereochemistry.



RN 703405-02-1 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-[(2-hydroxyethyl)amino]-2-[(4-methoxyphenyl)methyl]-, (9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

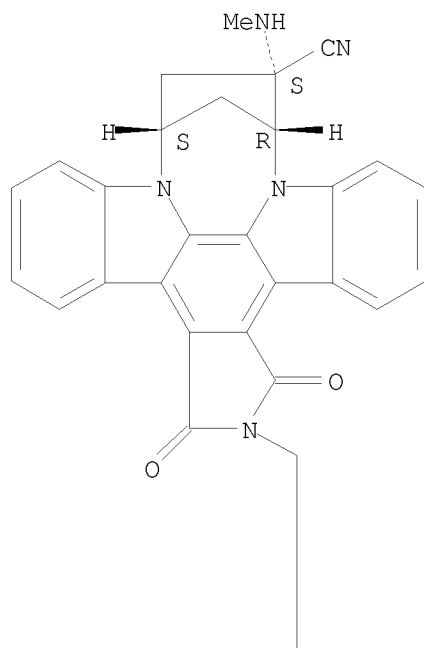


RN 703405-04-3 CAPLUS

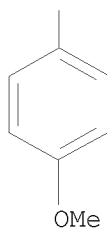
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile,
2,3,9,10,11,12-hexahydro-2-[(4-methoxyphenyl)methyl]-10-(methylamino)-1,3-dioxo-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



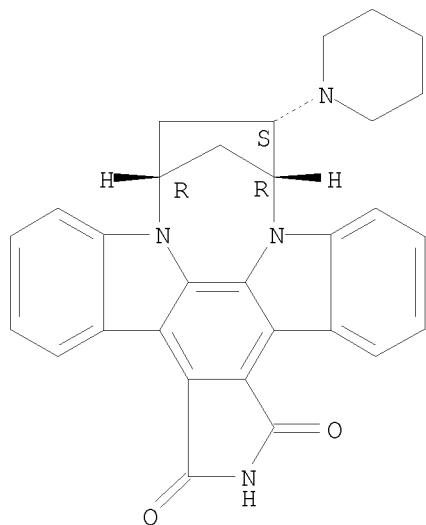
PAGE 2-A



RN 703405-06-5 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-(1-piperidinyl)-, (9R,10S,12R)-rel- (9CI) (CA
 INDEX NAME)

Relative stereochemistry.

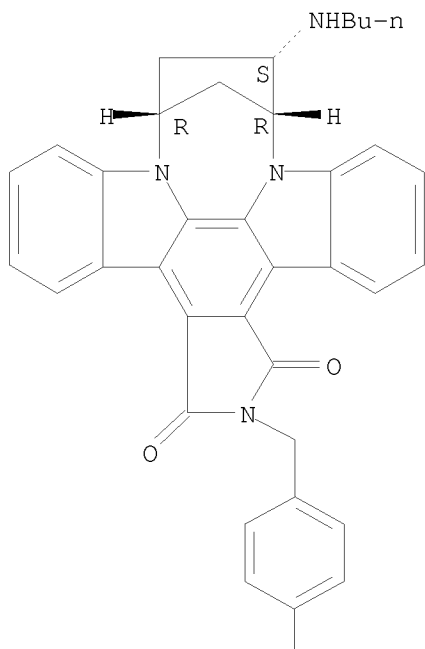
10/532,263



RN 703405-07-6 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
10-(butylamino)-9,10,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-,
(9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



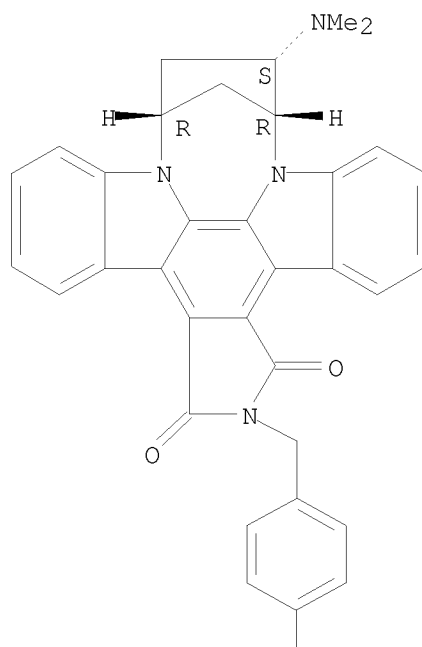
PAGE 2-A



RN 703405-08-7 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 10-(dimethylamino)-9,10,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-,
 (9R,10S,12R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



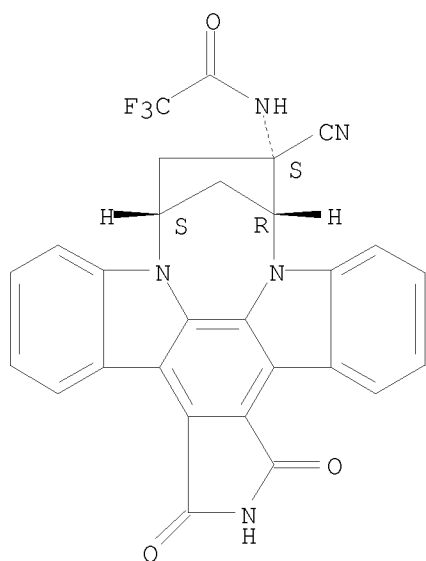
PAGE 2-A



RN 703405-09-8 CAPLUS
 CN Acetamide, N-[(9R,10S,12S)-10-cyano-2,3,9,10,11,12-hexahydro-1,3-dioxo-
 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10-yl]-2,2,2-trifluoro-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

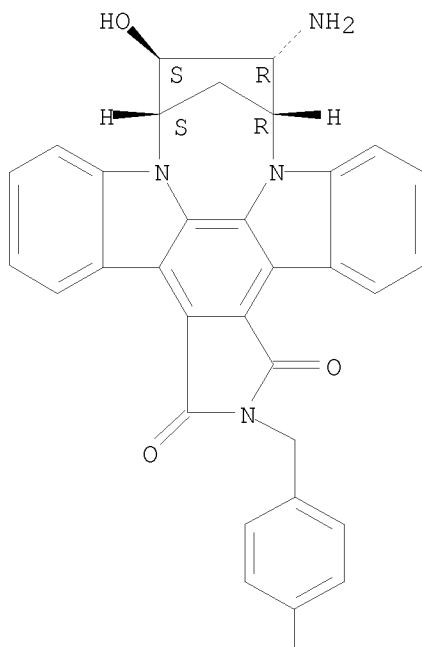
10/532,263



RN 703405-10-1 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
10-amino-9,10,11,12-tetrahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-,
(9R,10R,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



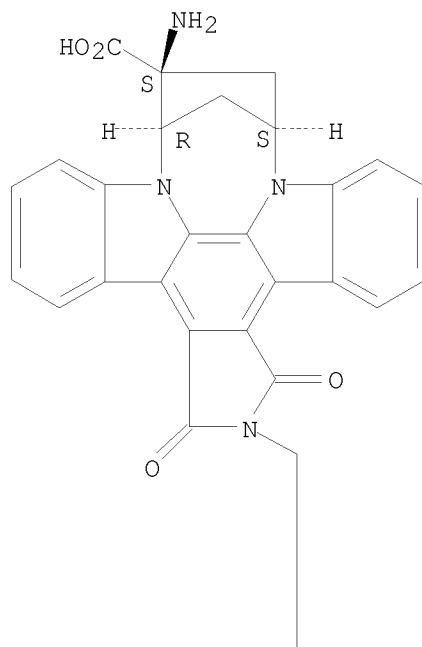
PAGE 2-A



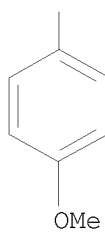
RN 703405-13-4 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
 10-amino-2,3,9,10,11,12-hexahydro-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-,
 (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

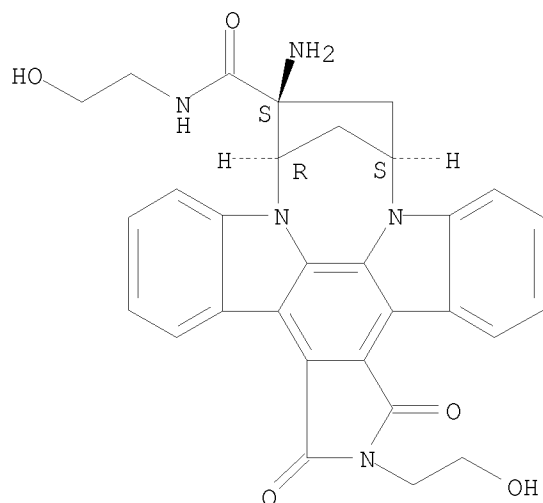


RN 703405-14-5 CAPLUS

10/532,263

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N,2-bis(2-hydroxyethyl)-1,3-dioxo-,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

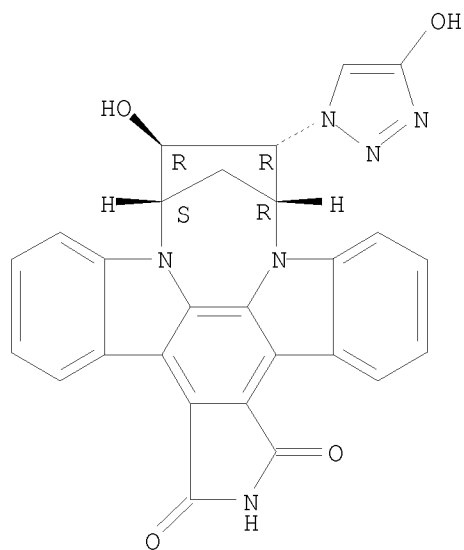
Relative stereochemistry.



RN 703405-15-6 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-hydroxy-11-(4-hydroxy-1H-1,2,3-triazol-1-yl)-,
(9R,10S,11S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

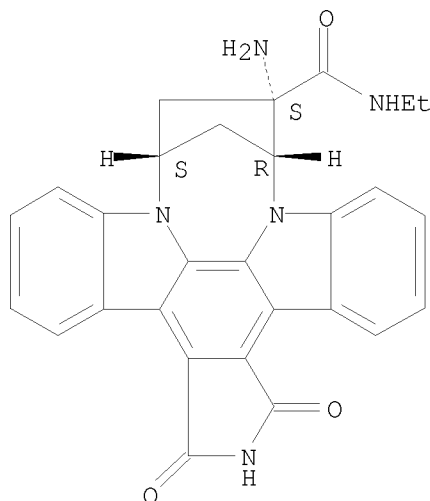


RN 703405-16-7 CAPLUS

10/532,263

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-N-ethyl-2,3,9,10,11,12-hexahydro-1,3-dioxo-, (9R,10S,12S)-rel-
(9CI) (CA INDEX NAME)

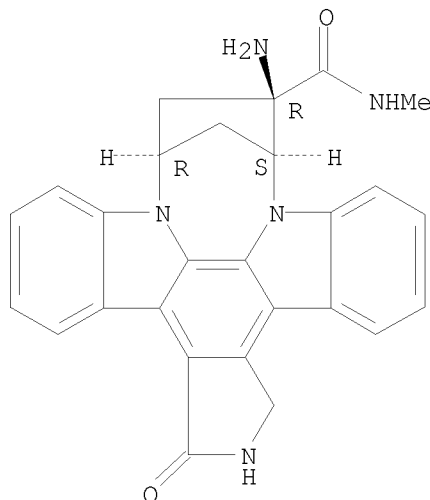
Relative stereochemistry.



RN 703405-22-5 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1-oxo-, (9S,10R,12R)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



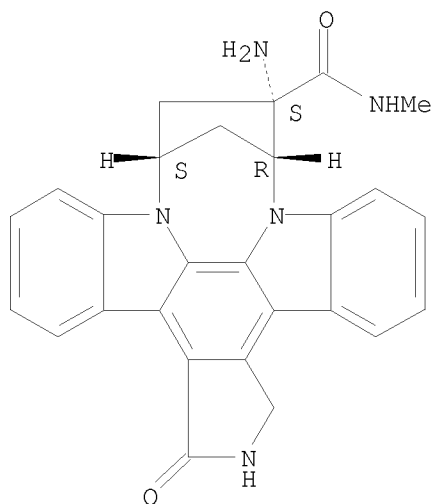
RN 703405-23-6 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,

10/532,263

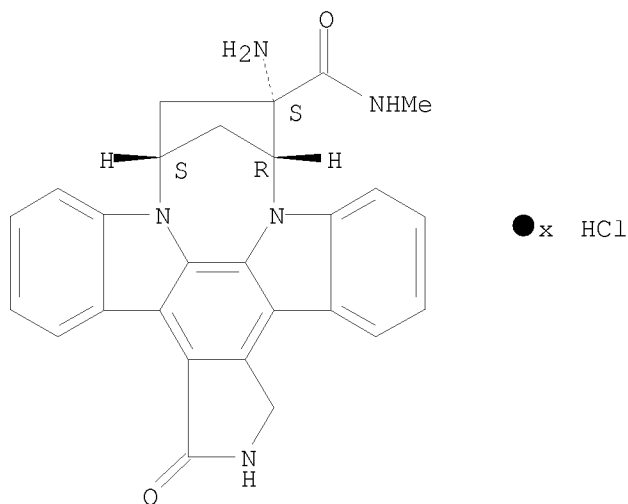
i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1-oxo-, (9R,10S,12S)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



RN 703405-24-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-N-methyl-1-oxo-, hydrochloride,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

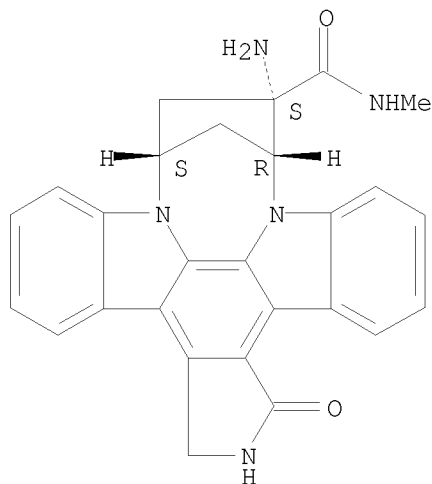


RN 703405-25-8 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocine-10-carboxamide,

10/532,263

10-amino-2,3,9,10,11,12-hexahydro-N-methyl-3-oxo-, hydrochloride,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



●x HCl

IT 233253-35-5P 253680-44-3P 253680-57-8P
253680-58-9P 703405-26-9P 703405-29-2P
703405-30-5P 703405-31-6P 703405-32-7P
703405-33-8P 703405-34-9P 703405-35-0P
703405-36-1P 703405-39-4P 703405-40-7P
703405-41-8P 703405-42-9P 703405-43-0P
703405-44-1P 703405-45-2P 703405-46-3P
703405-47-4P 703405-48-5P 703405-49-6P
703405-50-9P 703405-51-0P 703405-52-1P
703405-53-2P 703405-54-3P 703405-55-4P
703405-56-5P 703405-57-6P 703405-58-7P
703405-59-8P 703405-60-1P

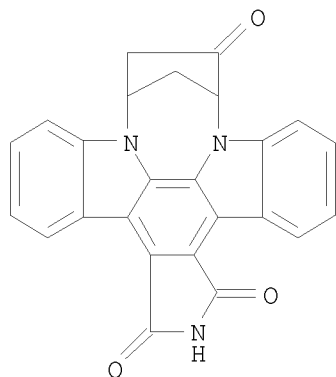
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(preparation of N,N-bridged, nitrogen-substituted carbacyclic
indolocarbazoles for use in pharmaceutical compns. as protein kinase
inhibitors)

RN 233253-35-5 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocine-1,3,10(2H,9H)-trione, 11,12-dihydro- (9CI) (CA
INDEX NAME)

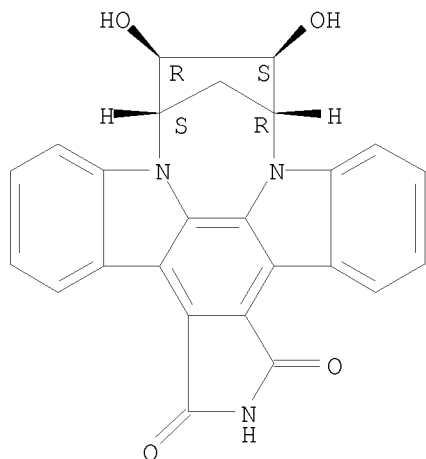
10/532,263



RN 253680-44-3 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10,11-dihydroxy-, (9R,10S,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

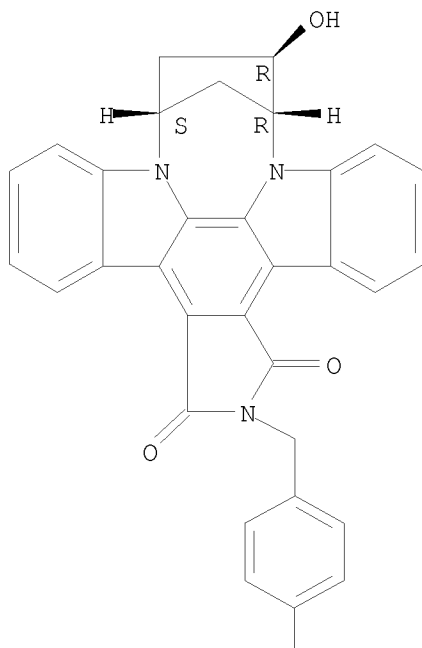


RN 253680-57-8 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-, (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

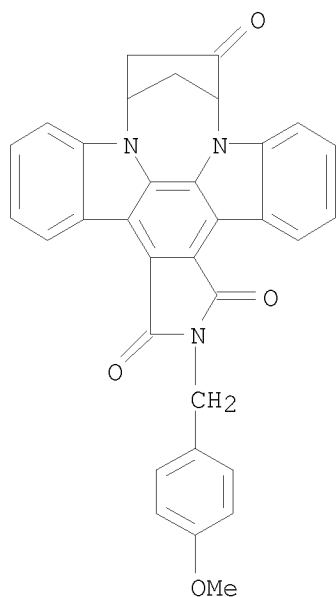


PAGE 2-A



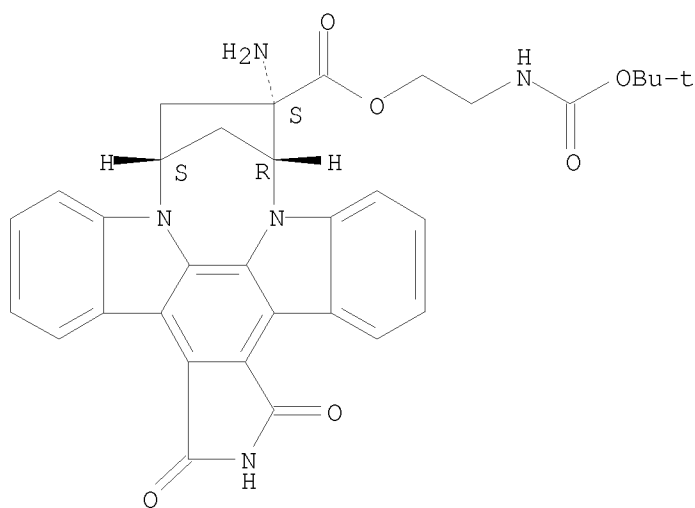
RN 253680-58-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
 11,12-dihydro-2-[(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)

10/532,263



RN 703405-26-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 10-amino-2,3,9,10,11,12-hexahydro-1,3-dioxo-, 2-[(1,1-dimethylethoxy)carbonyl]amino]ethyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



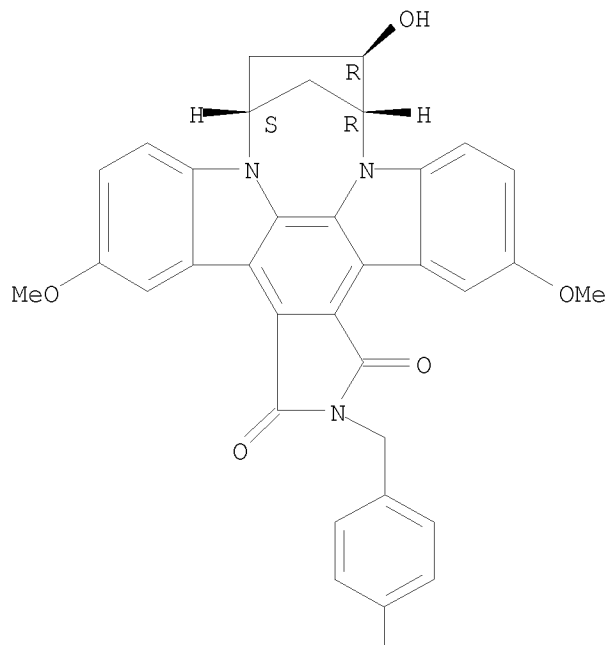
RN 703405-29-2 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione, 9,10,11,12-tetrahydro-10-hydroxy-5,16-dimethoxy-2-[(4-

10/532,263

methoxyphenyl)methyl]-, (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

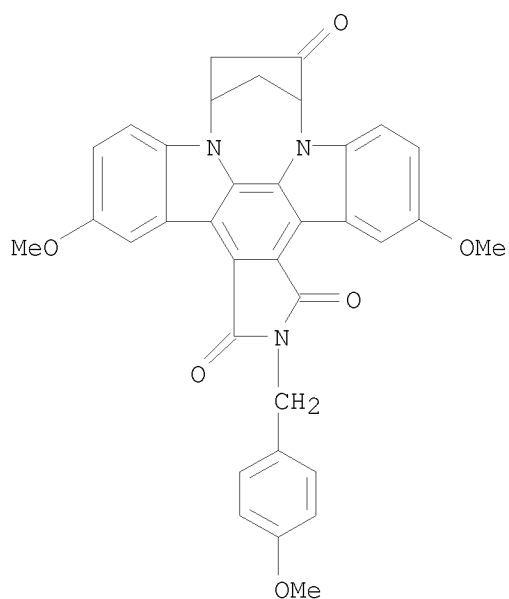


PAGE 2-A

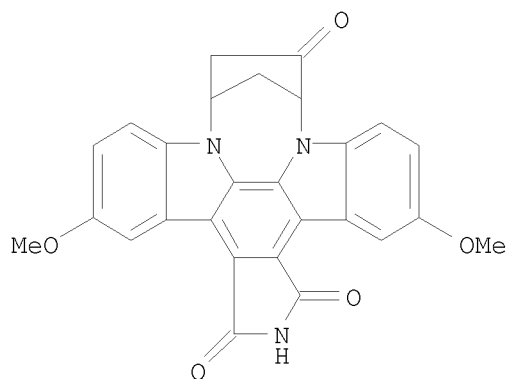


RN 703405-30-5 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
11,12-dihydro-5,16-dimethoxy-2-[(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)

10/532,263



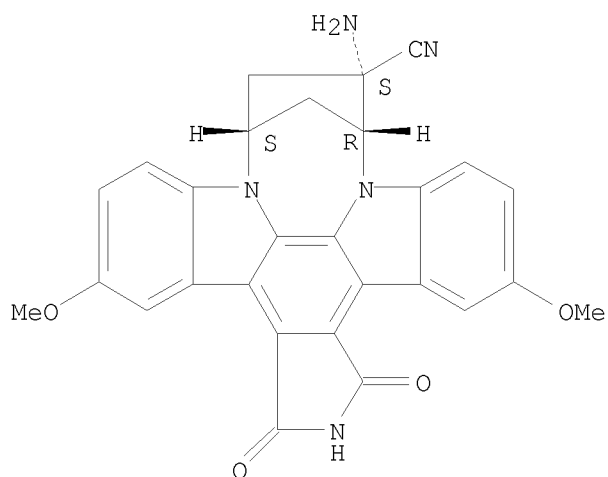
RN 703405-31-6 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione, 11,12-dihydro-5,16-dimethoxy- (9CI) (CA INDEX NAME)



RN 703405-32-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile, 10-amino-2,3,9,10,11,12-hexahydro-5,16-dimethoxy-1,3-dioxo-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

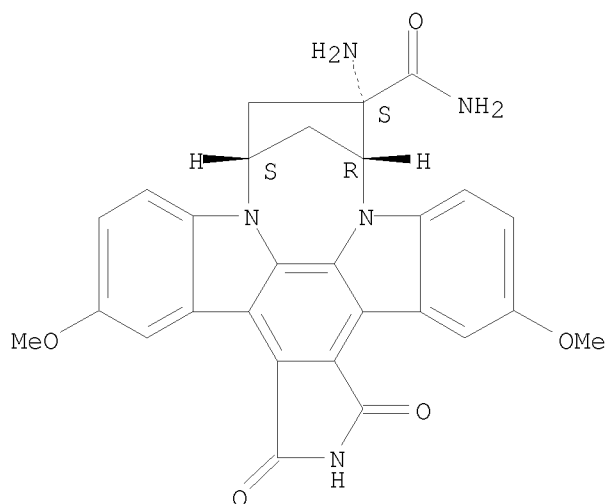
10/532,263



RN 703405-33-8 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-5,16-dimethoxy-1,3-dioxo-,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

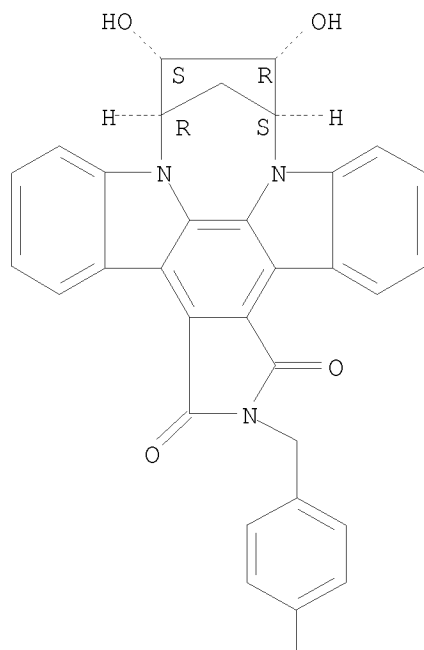


RN 703405-34-9 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10,11-dihydroxy-2-[(4-methoxyphenyl)methyl]-,
(9R,10S,11R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

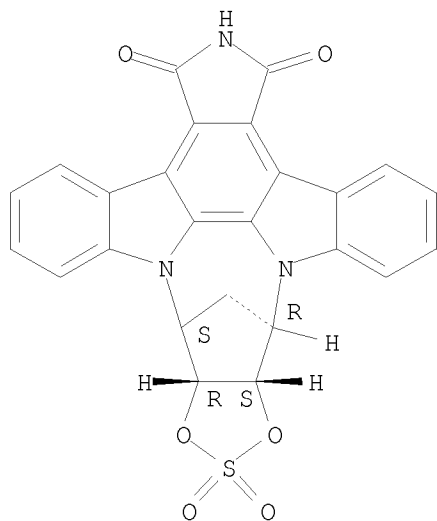


RN 703405-35-0 CAPLUS

CN 6,10-Methano-16H-[1,3,2]dioxathiolo[4,5-c]diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-16,18(17H)-dione, 6,6a,9a,10-tetrahydro-, 8,8-dioxide, (6R,6aS,9aR,10S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

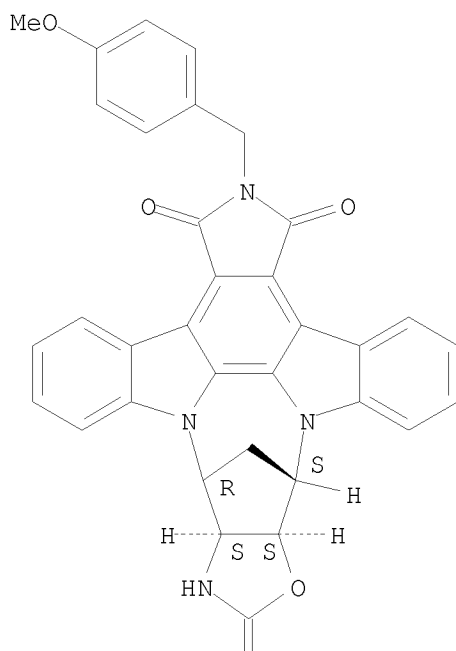
10/532,263



RN 703405-36-1 CAPLUS
CN 6,10-Methano-16H-diindolo[1,2,3-fg:3',2',1'-kl]oxazolo[4,5-c]pyrrolo[3,4-i][1,6]benzodiazocine-8,16,18(9H,17H)-trione,
6,6a,9a,10-tetrahydro-17-[(4-methoxyphenyl)methyl]-, (6R,6aR,9aR,10S)-rel-
(9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

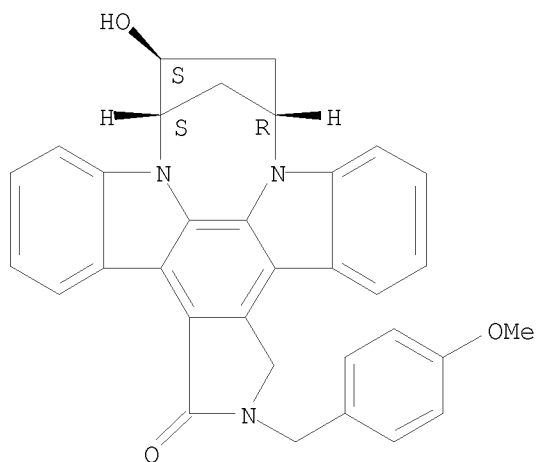




RN 703405-39-4 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-1-one, 2,3,9,10,11,12-hexahydro-11-hydroxy-2-[(4-methoxyphenyl)methyl]-, (9R,11S,12S)-rel- (9CI) (CA INDEX NAME)

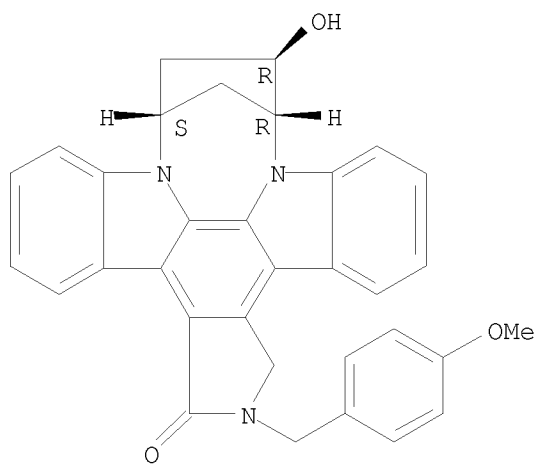
Relative stereochemistry.



RN 703405-40-7 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-1-one, 2,3,9,10,11,12-hexahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-, (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



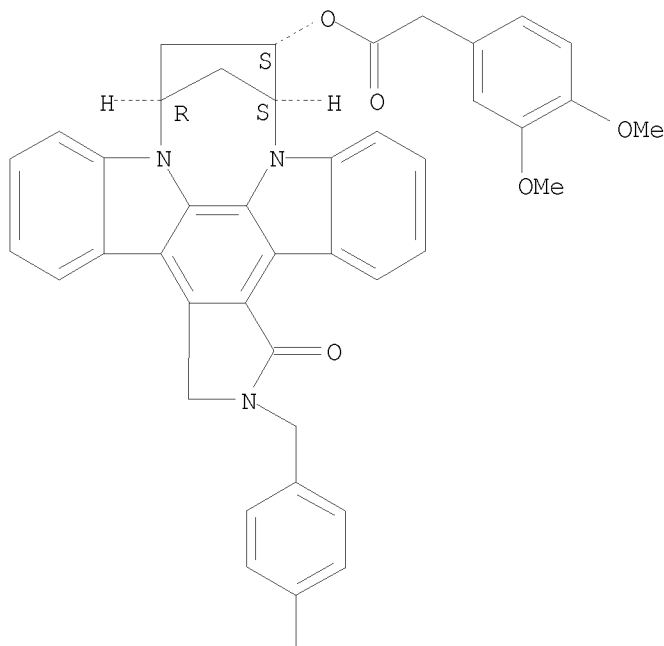
RN 703405-41-8 CAPLUS

10/532,263

CN Benzeneacetic acid, 3,4-dimethoxy-,
(9R,10R,12S)-2,3,9,10,11,12-hexahydro-2-[(4-methoxyphenyl)methyl]-3-oxo-
9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocin-10-yl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



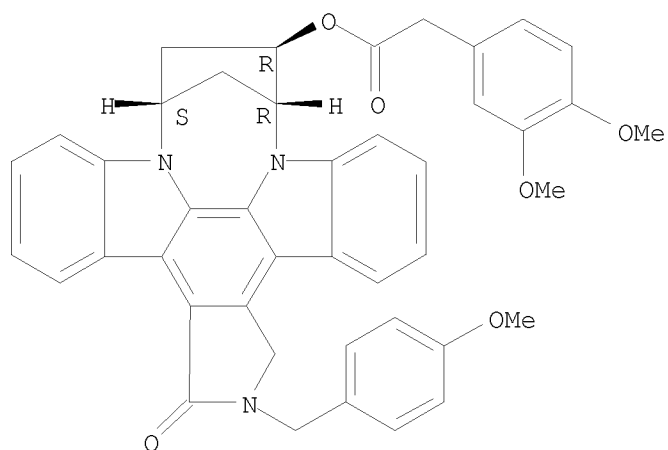
PAGE 2-A



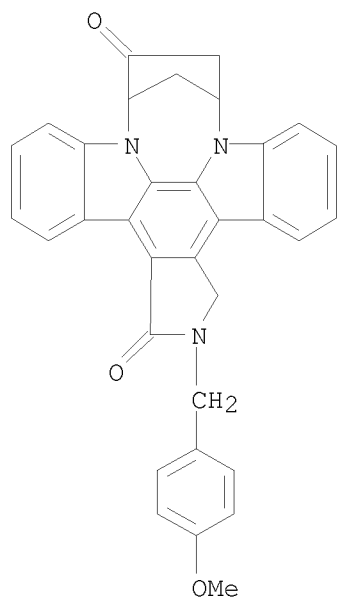
RN 703405-42-9 CAPLUS
CN Benzeneacetic acid, 3,4-dimethoxy-,
(9R,10R,12S)-2,3,9,10,11,12-hexahydro-2-[(4-methoxyphenyl)methyl]-1-oxo-
9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
i][1,6]benzodiazocin-10-yl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

10/532,263

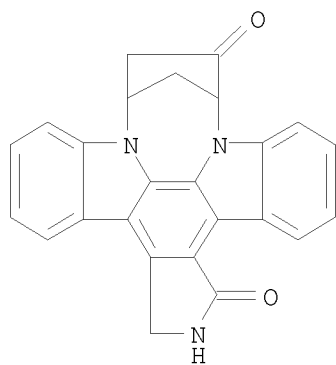


RN 703405-43-0 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,11(12H)-dione, 2,3,9,10-tetrahydro-2-[(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)



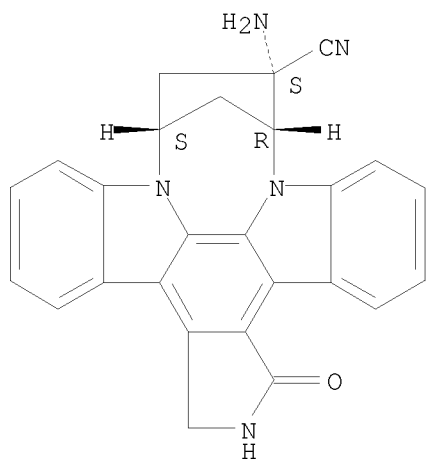
RN 703405-44-1 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,11(12H)-dione, 2,3,9,10-tetrahydro- (9CI) (CA INDEX NAME)

10/532,263



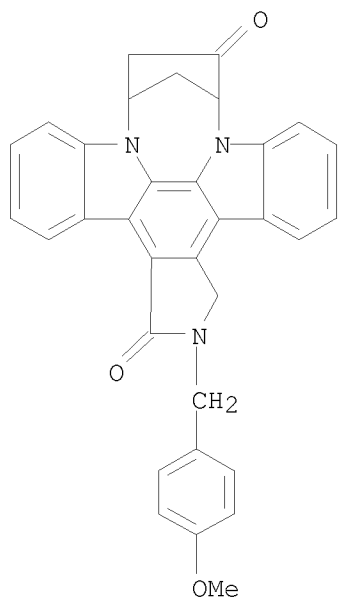
RN 703405-45-2 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile,
10-amino-2,3,9,10,11,12-hexahydro-3-oxo-, (9R,10S,12S)-rel- (9CI) (CA
INDEX NAME)

Relative stereochemistry.

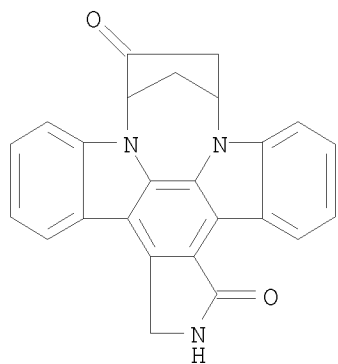


RN 703405-46-3 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,10(9H)-dione,
2,3,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)

10/532,263



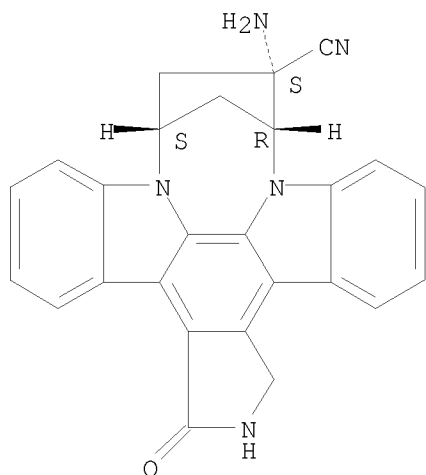
RN 703405-47-4 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,10(9H)-dione, 2,3,11,12-tetrahydro- (9CI) (CA INDEX NAME)



RN 703405-48-5 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile, 10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

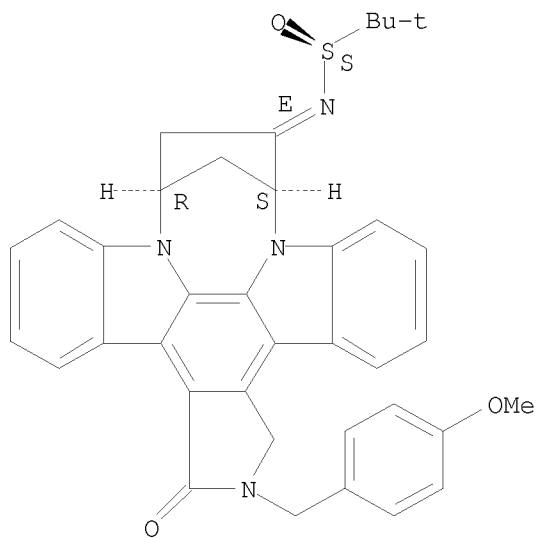
10/532,263



RN 703405-49-6 CAPLUS

CN 2-Propanesulfinamide, 2-methyl-N-[(9S,12R)-2,3,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-1-oxo-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10(9H)-ylidene]-, [N(E),S(S)]- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



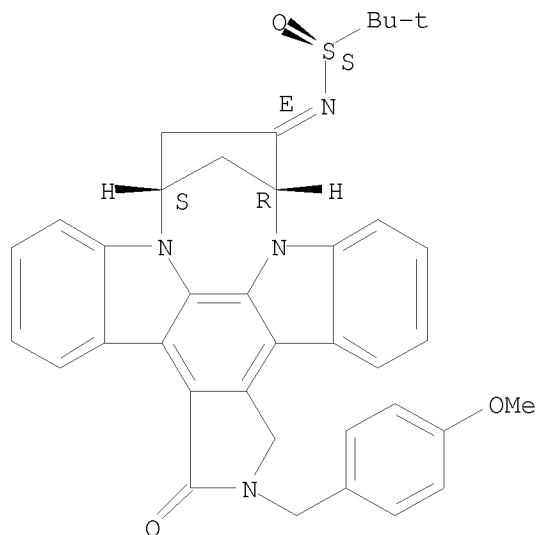
RN 703405-50-9 CAPLUS

CN 2-Propanesulfinamide, 2-methyl-N-[(9R,12S)-2,3,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-1-oxo-9,12-methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocin-10(9H)-ylidene]-, [N(E),S(S)]- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

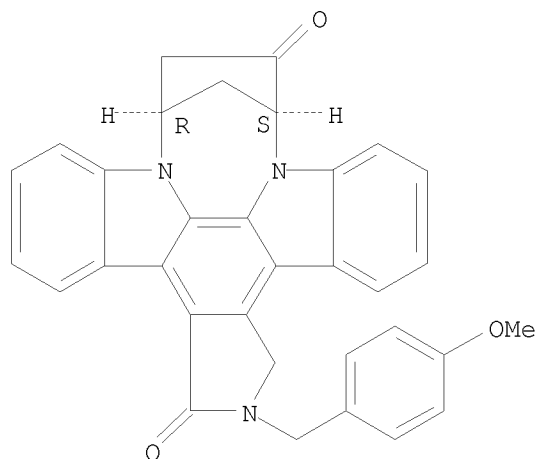
10/532,263

Double bond geometry as shown.



RN 703405-51-0 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,10(9H)-dione, 2,3,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-, (9S,12R)- (9CI) (CA INDEX NAME)

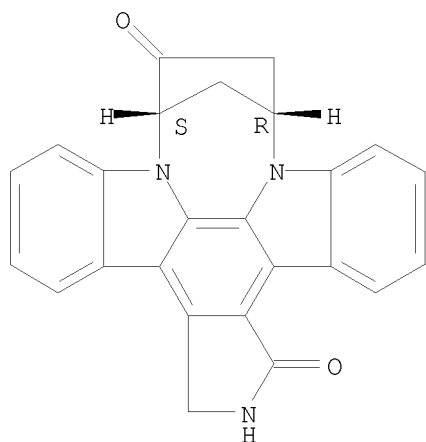
Absolute stereochemistry.



RN 703405-52-1 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,10(9H)-dione, 2,3,11,12-tetrahydro-, (9S,12R)- (9CI) (CA INDEX NAME)

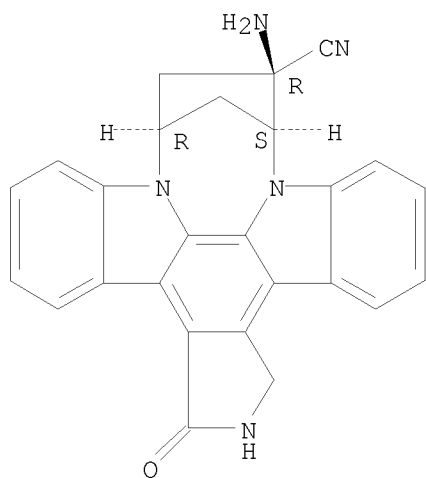
Absolute stereochemistry.

10/532,263



RN 703405-53-2 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile,
10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, (9S,10R,12R)- (9CI) (CA INDEX
NAME)

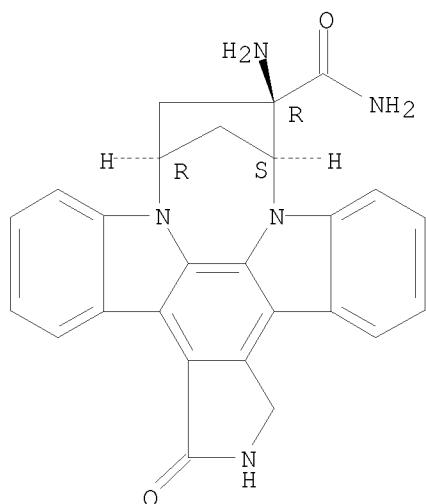
Absolute stereochemistry.



RN 703405-54-3 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, (9S,10R,12R)- (9CI) (CA INDEX
NAME)

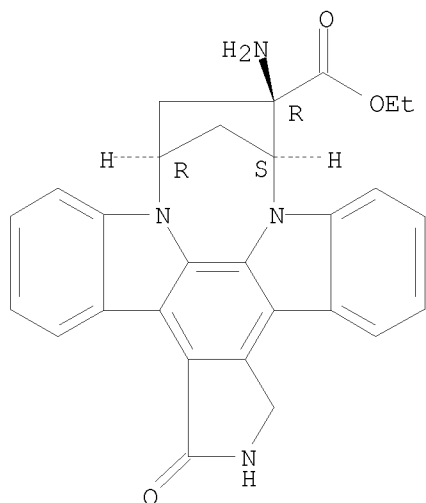
Absolute stereochemistry.

10/532,263



RN 703405-55-4 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, ethyl ester, (9S,10R,12R)- (9CI)
(CA INDEX NAME)

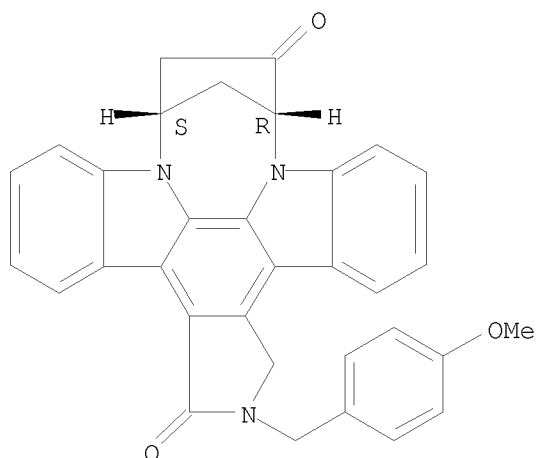
Absolute stereochemistry.



RN 703405-56-5 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,10(9H)-dione,
2,3,11,12-tetrahydro-2-[(4-methoxyphenyl)methyl]-, (9R,12S)- (9CI) (CA
INDEX NAME)

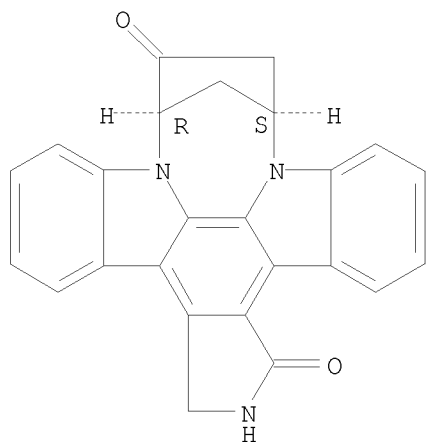
Absolute stereochemistry.

10/532,263



RN 703405-57-6 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,10(9H)-dione, 2,3,11,12-tetrahydro-, (9R,12S)-(9CI) (CA INDEX NAME)

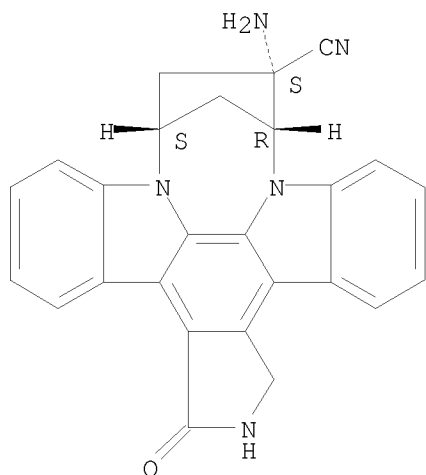
Absolute stereochemistry.



RN 703405-58-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile, 10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, (9R,10S,12S)-(9CI) (CA INDEX NAME)

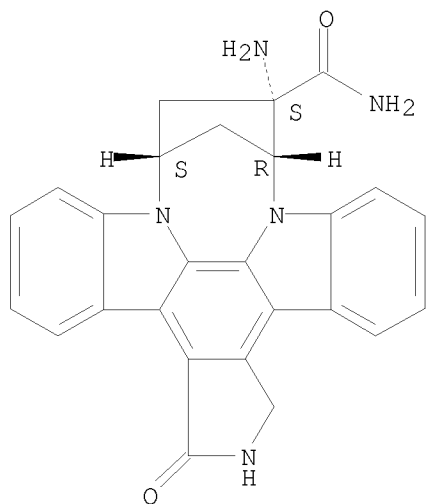
Absolute stereochemistry.

10/532,263



RN 703405-59-8 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, (9R,10S,12S)- (9CI) (CA INDEX NAME)

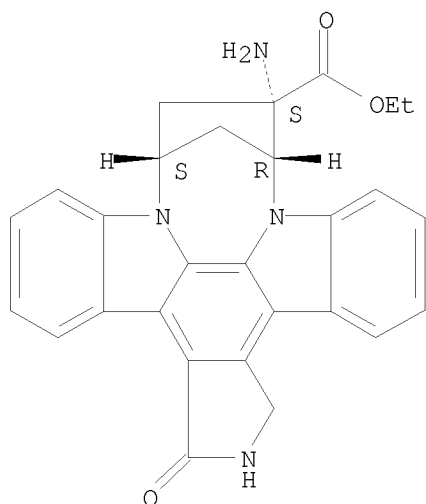
Absolute stereochemistry.



RN 703405-60-1 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
10-amino-2,3,9,10,11,12-hexahydro-1-oxo-, ethyl ester, (9R,10S,12S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

10/532,263



REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:31347 CAPLUS

DOCUMENT NUMBER: 132:78734

TITLE: Preparation of indolocarbazole derivatives useful for the treatment of neurodegenerative diseases

INVENTOR(S): Roder, Hanno; Lowinger, Timothy B.; Brittelli, David R.; Vanzandt, Michael C.

PATENT ASSIGNEE(S): Bayer Corporation, USA

SOURCE: U.S., 23 pp.
CODEN: USXXAM

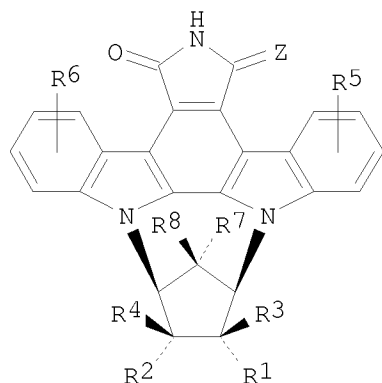
DOCUMENT TYPE: Patent

LANGUAGE: English

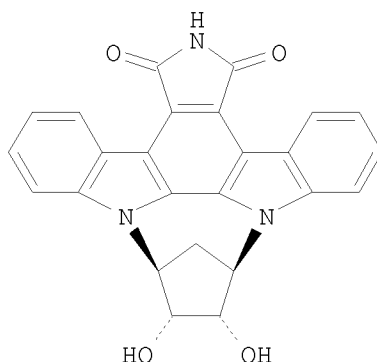
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6013646	A	20000111	US 1998-109131	19980702
CA 2336419	A1	20000113	CA 1999-2336419	19990623
WO 2000001699	A1	20000113	WO 1999-EP4369	19990623
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9947766	A	20000124	AU 1999-47766	19990623
AU 754399	B2	20021114		
EP 1091962	A1	20010418	EP 1999-931158	19990623
R: DE, ES, FR, GB, IT				
JP 2002519425	T	20020702	JP 2000-558102	19990623
US 6541468	B1	20030401	US 1999-382539	19990825
PRIORITY APPLN. INFO.:			US 1998-109131	A 19980702
			WO 1999-EP4369	W 19990623
OTHER SOURCE(S):		MARPAT 132:78734		
GI				

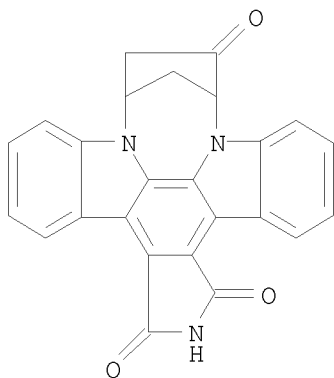


I



II

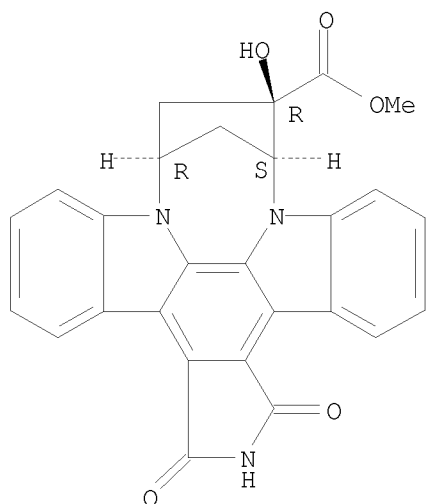
- AB Indolocarbazoles I [R1 = H, OH, carboxy, carboxamido, alkyloxyalkyl; R2, R3, R4 = H, OH; R5, R6 = H, OH, amino, acylamino, acyloxy, alkyloxy, carboxy, carboxamido, halogen; R7, R8 = H, OH, halogen; R7R8 = oxo; Z = O, H2], which are analogs of K 252a, a naturally occurring alkaloid, were prepared for potential use in the treatment of neurodegenerative diseases characterized by tau hyperphosphorylation, such as Alzheimer's disease (AD), frontal lobe degeneration (FLD), argyrophilic grains disease, subacute sclerotizing panencephalitis (SSPE), and cancer. Thus, indolocarbazole II was prepared in a 5 step synthetic sequence starting from (1R,3S)-4-cyclopentene-1,3-diol monoacetate and 12,13-dihydro-6-[(4-methoxyphenyl)methyl]-5H-indolo[2,3-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione. The prepared compds. were assayed for cAMP-dependent kinase and cdc2 kinase inhibiting activity.
- IT 233253-35-5P 233253-37-7P 253680-44-3P
253680-48-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of indolocarbazole derivs. useful for the treatment of neurodegenerative diseases characterized by tau hyperphosphorylation and cancer)
- RN 233253-35-5 CAPLUS
- CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione, 11,12-dihydro- (9CI) (CA INDEX NAME)



- RN 233253-37-7 CAPLUS
- CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 2,3,9,10,11,12-hexahydro-10-hydroxy-1,3-dioxo-, methyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

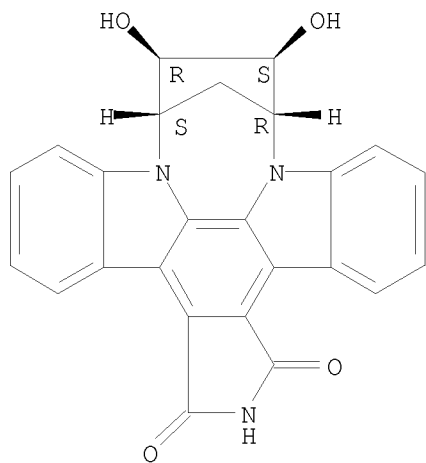
Relative stereochemistry.

10/532,263



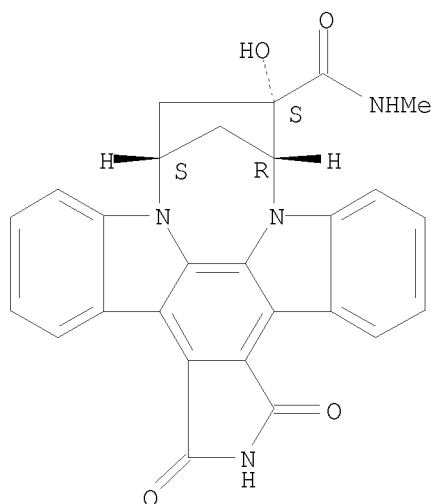
RN 253680-44-3 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10,11-dihydroxy-, (9R,10S,11R,12S)-rel- (9CI) (CA
INDEX NAME)

Relative stereochemistry.



RN 253680-48-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
2,3,9,10,11,12-hexahydro-10-hydroxy-N-methyl-1,3-dioxo-, (9R,10S,12S)-rel-
(9CI) (CA INDEX NAME)

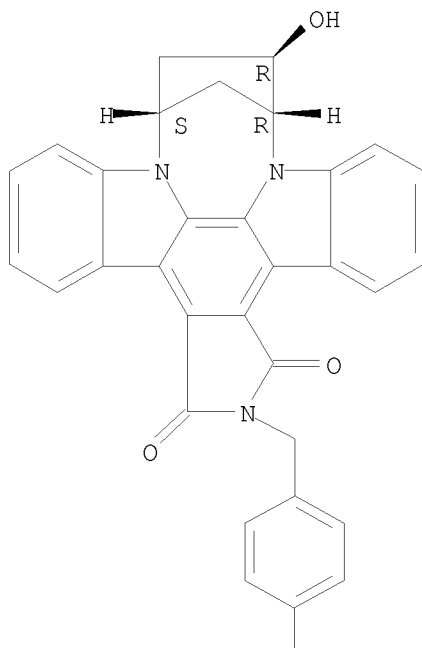
Relative stereochemistry.



IT 253680-57-8P 253680-58-9P 253680-60-3P
 253680-62-5P 253680-64-7P 253680-66-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of indolocarbazole derivs. useful for the treatment of
 neurodegenerative diseases characterized by tau hyperphosphorylation
 and cancer)
 RN 253680-57-8 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-
 i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-,
 (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

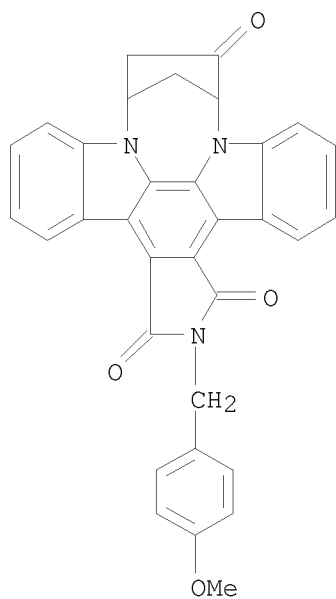


PAGE 2-A



RN 253680-58-9 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
 11,12-dihydro-2-[(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)

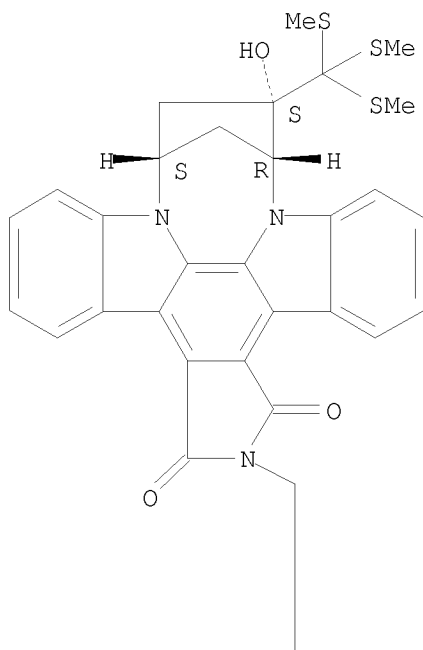
10/532,263



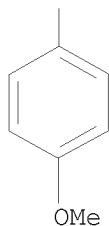
RN 253680-60-3 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
9,10,11,12-tetrahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-10-
[tris(methylthio)methyl]-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



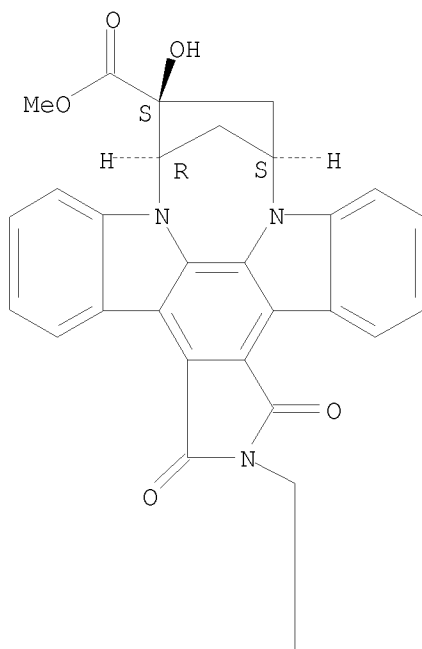
PAGE 2-A



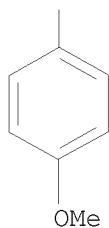
RN 253680-62-5 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
 2,3,9,10,11,12-hexahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-
 , methyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



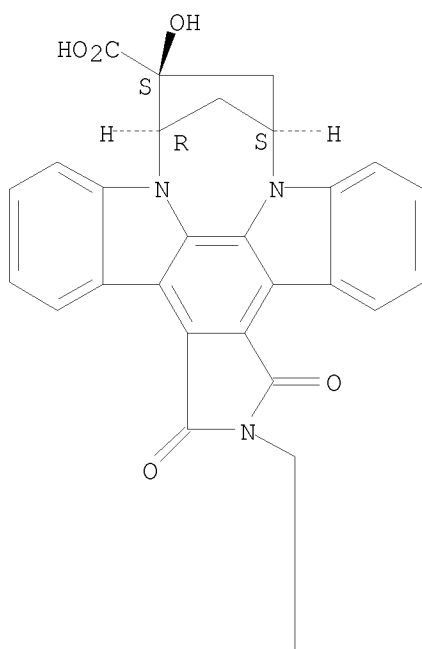
PAGE 2-A



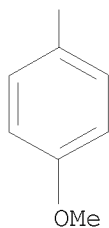
RN 253680-64-7 CAPLUS
 CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
 2,3,9,10,11,12-hexahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-1,3-dioxo-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



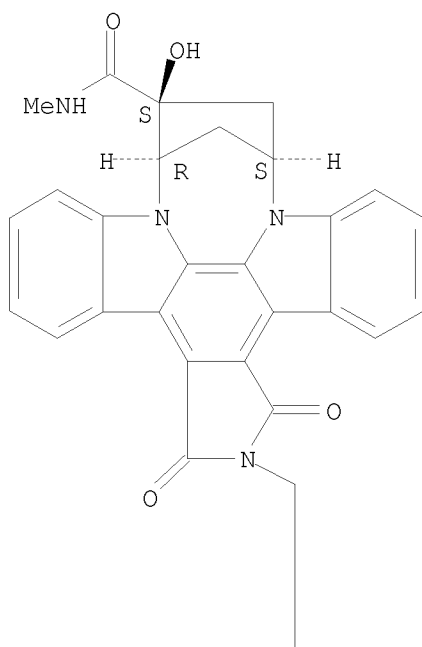
PAGE 2-A

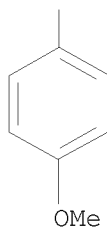


RN 253680-66-9 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxamide,
2,3,9,10,11,12-hexahydro-10-hydroxy-2-[(4-methoxyphenyl)methyl]-N-methyl-
1,3-dioxo-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A

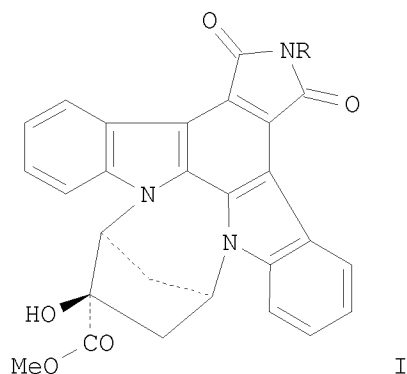




REFERENCE COUNT:

17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:320447 CAPLUS
 DOCUMENT NUMBER: 131:116392
 TITLE: Synthesis of novel carbocyclic analogues of
 indolocarbazole natural products
 AUTHOR(S): Riley, Dean A.; Simpkins, Nigel S.
 CORPORATE SOURCE: School of Chemistry, University of Nottingham,
 University Park, Nottingham, NG7 2RD, UK
 SOURCE: Tetrahedron Letters (1999), 40(20), 3929-3932
 CODEN: TELEAY; ISSN: 0040-4039
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 131:116392
 GI



AB The synthesis of some cyclopentane-bridged indolocarbazoles, such as I (R = benzyl, H) representing carbocyclic analogs of the natural product K-252a, was achieved by a concise, convergent route, and the ring expansion of one compound to a staurosporine-type derivative was also demonstrated. The products are potent inhibitors of protein kinase C (PKC) (no data).

IT 233253-26-4P 233253-27-5P 233253-28-6P
 233253-30-0P 233253-31-1P 233253-34-4P
 233253-35-5P 233253-36-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

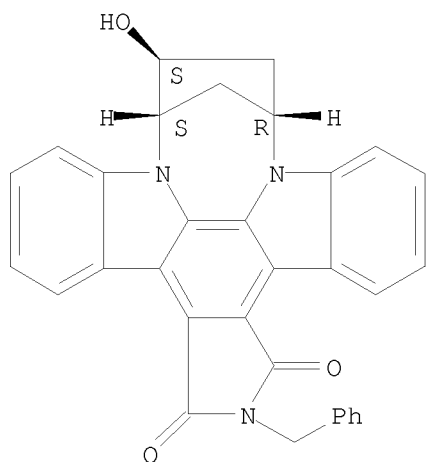
(synthesis of novel carbocyclic analogs of staurosporine and K 252a indolocarbazole natural products)

RN 233253-26-4 CAPLUS

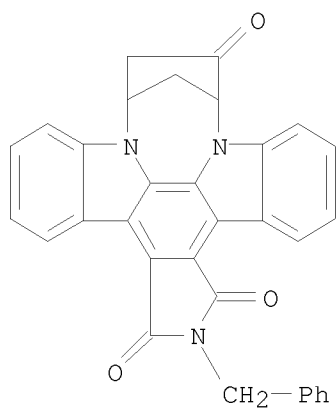
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
 9,10,11,12-tetrahydro-10-hydroxy-2-(phenylmethyl)-, (9R,10R,12S)-rel-
 (9CI) (CA INDEX NAME)

Relative stereochemistry.

10/532,263



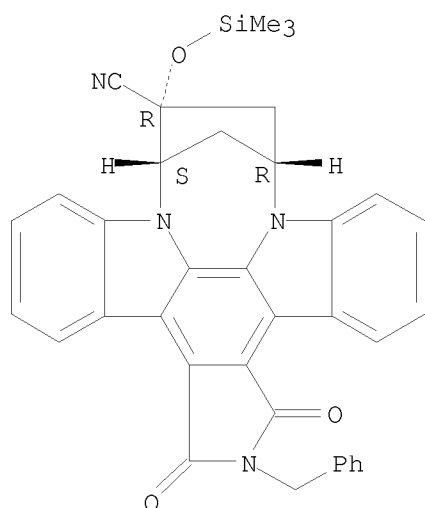
RN 233253-27-5 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione,
11,12-dihydro-2-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 233253-28-6 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile,
2,3,9,10,11,12-hexahydro-1,3-dioxo-2-(phenylmethyl)-10-
[(trimethylsilyl)oxy]-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

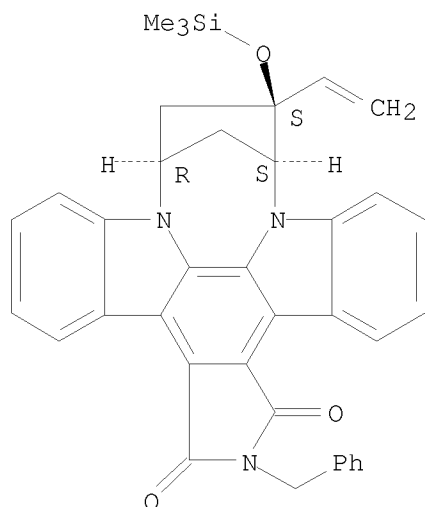
10/532,263



RN 233253-30-0 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione,
10-ethenyl-9,10,11,12-tetrahydro-2-(phenylmethyl)-10-[(trimethylsilyl)oxy]-
, (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

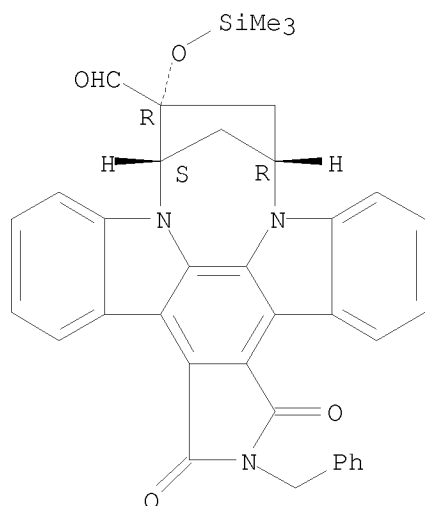


RN 233253-31-1 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxaldehyde,
2,3,9,10,11,12-hexahydro-1,3-dioxo-2-(phenylmethyl)-10-
[(trimethylsilyl)oxy]-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

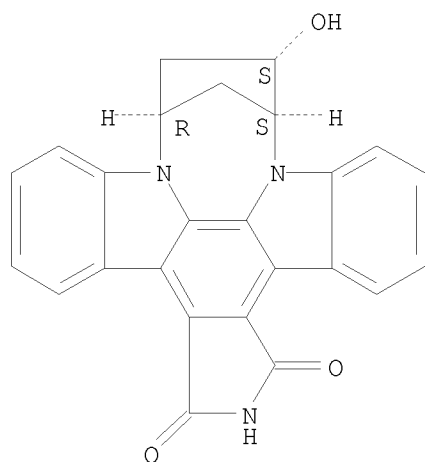
10/532,263



RN 233253-34-4 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3(2H)-dione, 9,10,11,12-tetrahydro-10-hydroxy-, (9R,10R,12S)-rel- (9CI) (CA INDEX NAME)

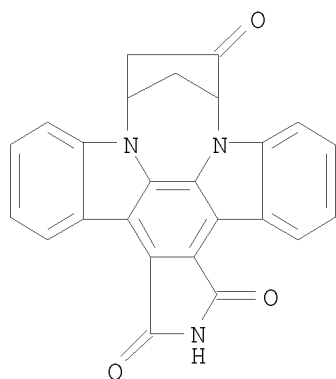
Relative stereochemistry.



RN 233253-35-5 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-1,3,10(2H,9H)-trione, 11,12-dihydro- (9CI) (CA INDEX NAME)

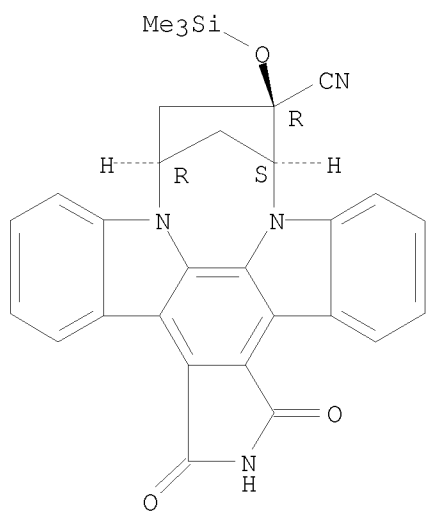
10/532,263



RN 233253-36-6 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carbonitrile, 2,3,9,10,11,12-hexahydro-1,3-dioxo-10-[(trimethylsilyl)oxy]-, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 233253-29-7P 233253-37-7P

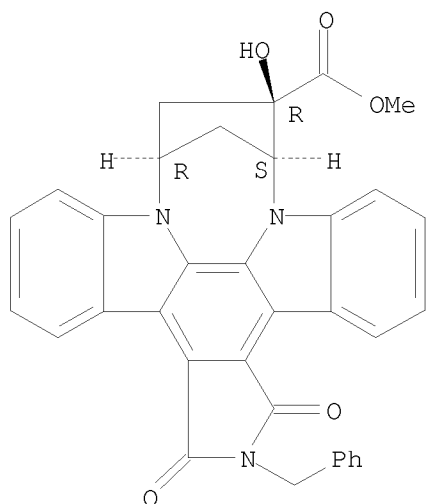
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of novel carbocyclic analogs of staurosporine and K 252a indolocarbazole natural products)

RN 233253-29-7 CAPLUS

CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, 2,3,9,10,11,12-hexahydro-10-hydroxy-1,3-dioxo-2-(phenylmethyl)-, methyl ester, (9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

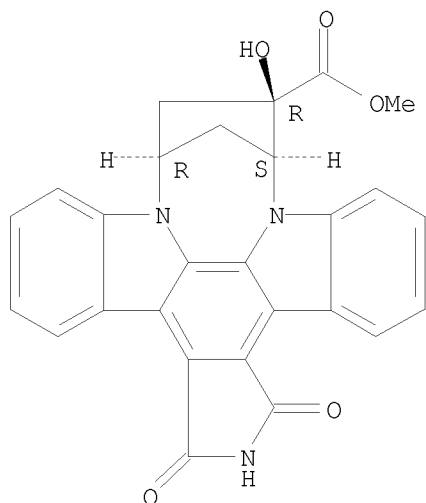
Relative stereochemistry.

10/532,263



RN 233253-37-7 CAPLUS
CN 9,12-Methano-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid,
2,3,9,10,11,12-hexahydro-10-hydroxy-1,3-dioxo-, methyl ester,
(9R,10S,12S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT